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THE PALISADES OF THE MOHAWK
FREDERICK B. HODGES



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The River

FREDERICK B. HODGES



PEWELLING by the river is a magician who will soothe your spirit; who will feed your soul with a delightful medley, the softness of the air, the greenness of the grass, rippling lights on the water, flickering sunlight, shadows that play about and around you, and gusts of wind that stir the trees.

What a subtle witchery is this of the river—flowing through the dark forest, winding its way in the spacious fields, skirting the hill-sides. It seems to be ever beckoning. It lures us with its flood of beautiful memories, its serenity, silver in the morning, golden at night. We should invest it with poetry, we should clothe it with æsthetic thoughts and revere our dreams of it.

From its source to its end, it is one of the brightest pictures Nature offers us, replete with messages of charm. The glow of outdoor freshness follows me along its banks, and I seem to fairly absorb the atmosphere. It always appeals to me as a colorful, swiftly changing thing of life, a lure of pulse-quickening joy flowing with its current. I love the river of bright visions that glistens in the morning-light. There is a message in its voice from the blue hills of its source, of the long day of sunshine as it came gleaming through brawling rapids, and the dreary night of rain as it flowed through the dark, silent wood. Like a friendly talk are these messages that roll along with the river; they tell stories of the marsh in the wind-stilled night, of the open stream through the meadow, the blue of heaven on its surface, stories of wild woods and picturesque pastures, of valleys filled with purple, lingering light, stories that float with the green waters as thoughts roam in the secret aisles of my heart.

What else is like a walk beside the river in spring, when the water seeps up through the grass and the smell of the ground is sweet? When soft breezes wander with us, when whispers steal

close to us from the glowing young willows, from the loveliness hidden in the cool silence of the stream, from the silent poetry of the earth, and from the murmuring heart of Nature everywhere? When I walk thus with the hold of Nature-love strongly upon me, I always think of the words of the poet.

"What thankful hearts have gleaned where I now glean,
What patient feet have passed this way before."

No man can have a proper and true love of Nature, unless he first understands and appreciates that "Cultivation is not a thing of the mind alone; it belongs to the spirit." The trouble is that people leave out the spiritual.

Back to the river I go again and again, and each time my heart is thrilled with new sweetness and I wonder if I care enough for the lovely summer-hours, for the pure fragrance of the fields, for the sky with its rolling clouds, for the sudden showers that refresh all Nature, for the quiet shadows of mid-day and the pleasant visions that come only at the close of day.

By the river always flowing and changing, the river that seems alive, I wish afresh that I could hear the tales its waters are telling as they are stirred in pretty rifts by gentle winds and bubble and gleam with the verdure's glowing reflections. No one could live long enough by the river to comprehend it all; its picturesque variety is endless. One should wander by it, pensive and silent, drinking in the beauty of its companionable fields, the charm of the light playing and fluttering, the soothing breezes, the wonderfully fair countenance of the sky. The river one roams beside in such a loving and intimate way will not be a large river, but just a big brother to the brook.

"O River dim with distance
Flow thus forever by,
A part of my existence
Within your heart doth lie."



THE RIVER OF THE MEADOWS

FREDERICK B. HODGES

The singing river is the river of the rapids. It sings of the "white horses" dancing and whirling over its water; it sings with the happiness that haunts the green groves by its side; the same joy that Nature's voice is so full of, here must echo in your soul if you are to know the river of the rapids.

The river's songs throb with this joy, and sometimes they are very near and wondrously sweet and clear, again they seem far away and only their echoes from the hillside reach us. One of the most heavenly experiences is to hear its twilight-songs just as the stars are blooming, such a peaceful spirit pervades them. The river of the rapids sings a morning-song, as it passes by sunny banks and green fields, that is filled with a strong and clear melody. Then when its waters are quieted a bit, its song sinks into a monotone that vibrates strangely through us, seeming like a solemn, measured hymn. Still further on in the wood, they are breathed from the old pines that stretch their gaunt limbs over the water, and call with a deep spirit of worship,

thrilling us with mystery. They voice the days long gone and those yet to come. For the river's most cheerful songs we must go to the waterfall at the end of the rapids; there they are of a ceaseless, stirring clamor, glad and lively with beautiful, shadowy undertones. After romping among the rocks at the foot of the waterfall it goes on its way, singing in a round, mellow voice once more. There seems to be no cessation of voice in the river of the rapids; even at night in the most quiet places, we are reminded of Longfellow's words, "The leaves of memory seemed to make a mournful rustling in the dark."

The river of measureless quiet is the river of the elms. Whittier's words come to me here, "Green calm below, blue quietness above." Sitting by the river that slips past so silently, watching dreamily its rhythmic flow, we feel something of magic creep into the sensation that steals over us. The very hills are dreaming, the soft air is filled with the meadow's sweetness, and the gently swaying grasses as they softly whisper are speaking to us in mysterious ways.



THE AUTHOR PHOTOGRAPHED

FREDERICK B. HODGES

Our thoughts are swift and true and full of the river's calm, content when the elms' cooling shadows are over us; the elms! ah, the stately elms! Their spirit flashes through us upon the river's shore, and the world seems forever fairer after a day with their river of delight. If we linger here where the river waits so quietly, the river lingers with us, its clouds so soft that float above us, its sky so fair between them and its face so radiant and smiling. Follow the loveliness of Nature here if you wish to secure a respite from the waves of care of the restless world. Stand at evening at the old familiar place on the river, darkened by the tree-shapes shadowed over it, and swept along its center by golden

lights. It will fill your spirit with a peace like the peace that fills the sleeping-blue mists on the mountainside. Take the old trail along the river under these leafy spaces and wander with the breath of wind that slips from the clouds overhead. This is dreamland, you will say, and so it is, for the river of the elms leans on her breast dreams of God's making.

Verily, God smiles in all these places. The river-elms quicken my heart as I look upon them and the golden sheen they cast over the water. There are sweetness and joy in all the growing things along the river; but the cool, green, waving elms—who shall say that they are not the crowning joy? The thrill they give me

is always new. Even when their tall, gray shapes are leafless and sway in the rising March wind over the watery way beside them, the charm is there. Thoreau must have stood under river-elm when he wrote, "Our life should be lived as tenderly and daintily as one would pluck a flower."

Our love of the autumn-river seems a sacred thing; the leaves floating in the air or on its surface are like gently falling memories. A mysterious quiet settles down over the autumn-river and touches our thoughts deeply—like strange and exalted dreams, the ripples in the water slip past. As it shines in the light between scattered trees, it reminds me of the road that wanders along, slipping between the hills or across the brook-bridge and through the heart of the wood.

The days back through the years that were spent by the river are a collection of beautiful memories; they kindle the flame that time had dimmed, and unfolding before us is a series of pictures whose atmosphere is magical. They make our present living more sweet and, as we watch the gentle hours go past by the river, the ruffled and rippled stream seems like the stream of life, a circling way, now golden with light and now darkened with shadows, now ruddy with the gems of love and suddenly grave with sorrow.

You missed something in youth if you had no river to roam beside, and you are missing just as much if you have none now. Ask what you will of the river, but ask with a heart that shines with the blue of its waters; then the river will always have a gift for you when you go to it. You cannot know another such coolness as comes with its breath, as it slips away, far in the meadows or hides deep in the greenwood; you have never seen anything so beautifully colored as the autumn-river at sunset, for its pure brilliance can never be rivaled by earthly means.

Nature's gifts to us are fair beyond measure; one glimpse of her green valleys and purple distances should give us fresh and higher courage, clearer faith and a more hopeful spirit. Can you go through the woods unconcerned; over the soft carpet of pine-needles, past the shining streams, with the soaring music of the wind calling to you, and have no feeling that there is some presence with you that dwells in all these places, a presence at once serene, secure and steadfast, waiting to fill your heart and possess your soul if you will but see and listen?

Along the evening-river, I am thrilled by a perfect sense of tranquillity; down the dusky stream, the tree-shapes rise dimly and seem to flank the watery way like a guard. The river is breathing individuality, is alive and bubbling over with the joy of living, and in the breadth of soft color I feel a warm sense of sympathy, an

appealing purity; from its deep loveliness it seems to look at me with affection.

The river of night is filled with a vivid poetry; the shadows are widening, one by one the clouds drift over the horizon and down the river's lane steals the subtle mystery of night. Few, indeed, know the river of night, when the sun has been lowered gently below the last hill and all the landscape is sinking, sinking, until the trees are but ghostly shapes and the river-waters are whispering weirdly. It is a miracle that follows the bright, sweet day; the colors left are so tender and yet so forceful, so nearly invisible and yet so visible. They stain the river and its banks with a heavenly radiance.

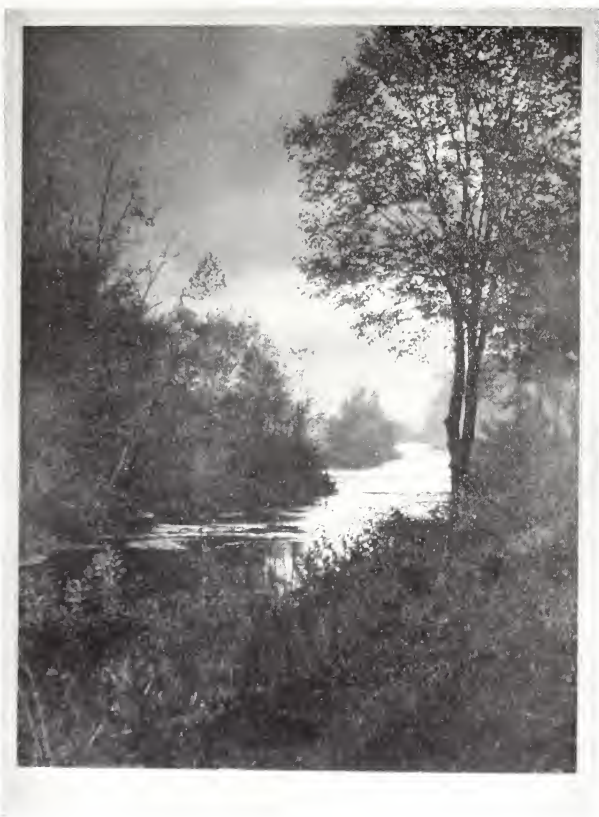
The river was born in the hills; in some rocky glade a tiny rill crept forth into the light and so began the life of the river. Even then it was filled with the same restless power as when it reached the sea, for God's spirit is in and through all Nature and His great purposes eternal flow on with the river.

Is it a river with wooded shores? Is it a river with soft, open banks? Is it a river with elms towering high above it? Is it a river at the edge of town with old buildings near, nestled quaint and gray beside it? Whichever your river is, your heart will warm along the meadow stream, as you stand in the shade of the elms' brown trunks hearing the song that flickers on the water, as you watch the playing light that haunts every nook in the borders and as the wind leans its soft hand against your face.

To tell your story of the river, to treat the subject according to your ideals, to stir and stimulate others to love the river as you do, should be the aim of your pictures. You should look on your groundglass with the same feeling that you look on the river. If you make a picture of the river and it reflects your mood, if it is a bit of self-expression, it will be something more than clever. One of the rarest things in life is a glimpse into a man's soul, and it may be that through your pictures you can cause others to feel that they are looking with you at the blowing trees and listening with you at the lips of Nature. Remember, no picture, however good technically, has lasting charm and worth, that is simply an analysis of a place.

Hitherto, as you roamed the wealth of meadow and woodland, of pastures and paths along the river, have you appreciated the splendor of Nature? Have your thoughts been above the perfectly obvious beauties around you? Has there seemed in the tranquil, gliding flow of the river a new breath of life?

Sometimes it is the delicate gray-blue of the sky, sometimes the brown-green tinge of the



THE RIVER OF EVENING
FREDERICK B. HODGES



THE RIVER OF THE WILLOWS

FREDERICK B. HODGES

verdure, sometimes the poetry of form and color in the sunlit spaces or the intimated mystery over all; river-days are all memorable and always have a gift awaiting me. It seems to me that I follow mysterious footsteps along the river-path, and I always look ahead to the curve in the distance where the water and the path glisten together and wish I could be there quickly enough to catch up with the secret forever eluding me.

Only a wee bit does my camera show what the river means to me, and at best your pictures and mine can indicate but a small measure of the charm we see and feel in Nature. However, your pictures depend on how you form them in your mind—you should see the river with grace and clearness; you must know it on the quiet, sleepy days when it seems to have stopped breathing;

you must know it on the sunny afternoons when it calls you to drink greedily of its beauty; you must know it in November when the wind comes with a ghostly rustle along its gloomy and deserted banks; you must follow it when it turns its course through the secret woods and winds voiceless among the dusky hemlocks. With this knowledge, your vision becomes tuned to the finer perceptions, your enthusiasm need never be tempered, and your welcome will never be worn out.

River-days are never wasted. Emerson said, "It seems as if the day was not wholly profane, in which we have given heed to some natural object." Whether you come away from the river with pictures on your sensitive plate or on your mind, you are richer for having been there.

Painters and Photography



IN that very interesting department "Critical Causerie" in *The Amateur Photographer*, conducted by "The Bandit" we find some pertinent notes which we quote. "It is notorious that painters are extraordinarily bad judges of things photographic. Nevertheless, the very photographers who most frequently proclaim that painters are prejudiced against photography seem to me sometimes to pay an exaggerated deference to painter-esque standards, and therefore, by inference, to the opinions of painters. The photographers who fake most unsparingly are exactly the photographers who, by this practice, show themselves most unreasoning worshippers at the shrine of paint-mannerisms, yet are also exactly the photographers who complain loudest at the contempt with which photography is held by painters.

"Personally, I have small reverence for the views of painters on the subject of photography, whether pictorial or otherwise, and I will add—at the risk of sounding cheaply satirical—that I am not sure that I have much reverence for the views of painters on the subject of any of the arts whatsoever, their own not excluded; inasmuch as having enjoyed the acquaintance of a good many painters, I generally noticed that, though they can express themselves with the brush, they are as a class singularly inarticulate in the spoken or written word.

"I gather from a recent book review that an American painter, Marsden Hartley, like Whistler is an exception. Alluding to photography he makes this remark: 'I find the snapshot, almost without exception, holding my interest for what

it contains of simple registration of and adherence to facts for themselves. . . . Photographers must know that fogging and blurring the image is curtailing the experience of it.'

"The first sentence, I must say, warms the cockles of my heart, for it states anew what I have said over and over again, not only in these Causeries, but also elsewhere, namely, that photography deals with *facts*. Of course, there are facts and facts—facts worth photographing and facts not worth photographing; and to bring my own definition into line with the pictorial, as distinct from the purely topographical or scientific, I worded my so-called slogan as follows: 'Point your camera at a beautiful fact and you get a beautiful photograph.'

"This excessively condensed aphorism has been ferociously attacked over and over again by the sort of photographers who at one moment would be 'fogging and blurring the image' of their pictures with bromoil brush or what not, to get nearer to what they imagine is the secret of 'art'—and what is not even the secret of the 'art' in the paintings of those whose tenets are in the back of their minds—and who at the next would be sneering at any painter's—including Mr. Hartley's—unfavorable criticism of their work; but I have still not repented of it. And as time passes I feel—or is it imagination on my part?—that a slight wind of popularity for this perfectly plain doctrine of mine is beginning to blow, and that even such probably casual sentences as the one from Mr. Hartley's book, quoted above, is a contribution to a current of movement perhaps soon to become genuinely important and influential in photographic circles."



THE ROAD TO FAIRY-LAND

W. X. KINCHELOE

Landscape-Photography in Florida as a Summer-Vacation

W. X. KINCHELOE

FOR most people, the thought of a vacation in Florida suggests a change from the cold and long, gray days of the North—days that add themselves into weeks when everything is drab and bleak, when the sun has not sufficient power to force its rays through the pall of smoke hanging over our big cities, and all the brightness and joy seems to have gone out of life. Florida, at these times, appeals to the senses and imagination; as, with its genial warmth, its mellow sunshine and its blue sky, it beckons, offering everything that nature can provide to make one happy.

By contrast, Florida then seems a veritable fairy-land; but to be seen at its best, it should be seen during the spring and summer-months. Then the deciduous trees are again clothed in their leafy garments, the evergreens have taken on a more vivid hue, the few scattering wild-flowers of the winter have given way to the brilliant canopies of spring. There is a softer, more restful tint to the blue of the sky; and the clouds, as they hang soft and fleecy, seem to have been put there purposely to add the final touch of completeness to the beautiful landscape.

Most people, however, fear the heat, reasoning doubtless that if Florida is so much warmer than their homes during the winter, the same difference would exist in the summer. This is a mistaken idea. To be perfectly frank, the first summer I spent here was the most pleasant summer of my life, and I had spent the last ten years, before coming here, in Chicago. It does not get as hot here as it does at times in the North; but where the hot spells in the North are intermittent, the warmth here is constant from April to October, with August as the hottest month. However, there is always a good breeze, and I have never seen it so hot that in the shade one was not comfortable. And, after two years spent in Jacksonville, I have never seen a man or horse overcome by the heat; so don't let that worry you. If you want to see Florida at its best, come any time during the spring or summer, as then only can you make the pictures that tell the story of the real Florida.

Sometimes, I wonder why it is that none of the really great artists of the brush or lens have pictured Florida. They probably came here for their winter-vacations. Is it that they feel

that the subject is far too big for them; or is it just inertia? Possibly they are in a rut, and would rather jog along painting the accustomed things rather than to take again their places as beginners in the study of nature in new aspects. Some day the pictorial possibilities of this state will be appreciated; but first, some pioneer, some one who loves our trees and moss with a love greater than his love of all other earthly

and repose. Many is the Sunday afternoon I have spent there, and these landscapes always appealed to me in the same way. There was something about them that called me and I could not resist.

After a few years, I came to Florida. It was in December when I arrived; and, of course, my camera was busy, for Florida was beautiful and very different. Then one day during the latter



A FLORIDA FARM-HOME

W. X. KINCHELOE

things, must come having at his command a technique which will enable him to make these things live again in his pictures. Then a new master will have arrived, and a school of American landscape-work will have been inaugurated which, in effect, will be very like that of the best Italian work.

I remember as vividly as if it were yesterday my first acquaintance with some of the Italian landscapes in the Chicago Art Institute. I had never before seen anything like them, and was filled with admiration for the genius that could imagine and paint such light. One picture in particular was vivid in its coloring, and ran the whole gamut of light and shade from the most brilliant highlights to the deepest shade; yet, it was so bathed and suffused with a soft, mellow light that the effect was one of softness

part of February, a perfect day for picture-making, when my camera and I were alone in the woods along the bank of the St. John's River, the beauty of the day, and the fresh, budding brilliance of the landscape appealed to me, and induced emotions that were vaguely familiar, as of something I had once known but could not recall. Then it came to me. That wonderful light which I had thought existed only in the painter's imagination, in those never-to-be-forgotten pictures, was enveloping the scene before me; and was my own to work with through all the spring and summer months.

Lacking training as a writer, I realise that I will be unable by the use of words to create an impression of Florida in her summer-moods. I believe I can put it in such a way that a musician will understand what I want to express. Nature

in her different moods reacts upon and induces emotions in us. These emotions unconsciously seek expression in some manner. While you are walking in the woods and fields of Florida on a typical summer-day, you will find yourself humming parts of the Melody in F, or Nevin's Narcissus; and if I were to live again in some other part of the country, I could not pick up my violin and play either of them without pictures of Florida in her summer-moods forming before my mind's eye.

There are practical reasons also for spending your summer-vacation here. It will cost you less than during the winter, and you will have plenty of room. Really, the eagerness of the small-town hotel-proprietor to please you is quite pathetic, and is in pleasant contrast to the nonchalance of these dignitaries during the busy season when every room is full and they are turning away numbers of would-be guests.

During the summer, every one is relaxed and taking life easy. Gone is the mad rush of the tourist-season; and the transient business-people have gone to seek pastures new in some northern summer-resort, so that you can really get acquainted with the "cracker" on his native heath.

There are many ways to see the state, the choice depending on the habits and tastes of the individual. One of the best methods is to drive down in an automobile, and use it to tour the state. Many motorists drive down during the winter when the roads are in their worst condition. During the late spring and summer, the roads are not only in their best condition; but the scenery along the route is much more inviting. Florida has a network of good roads leading to all the principal points; and, as the auto here, as elsewhere, has become the usual means of going to town for the farmers, even the country cross-roads are kept in fairly good condition. Traveling by auto or train is really the only way in which the greater part of the state can be seen in a short time; but the serious worker will not try to see the whole state in a few days. He will travel until he knows the characteristics of the state in its different parts; for Florida varies from the subtropical in the northern part to the purely tropical in the southern, and from the flat, low lands of the coastal regions to the higher, rolling land of the northwestern and central parts. Then, when he has found the character of landscape that appeals to him, he will be wise to stop, for the best picture-material will be found by knowing intimately one locality.

Selecting the camera for use on a photographic vacation is the one thing above all others that should not be put off until the last moment. This is the first thing I would impress on any one

when planning a picture-making trip. If you are a real artist, you want your pictures to tell the story of the things you have seen. Not just to show the outlines of trees and lakes; but to give the effect of the scenes as you saw them, and as they impressed themselves upon you.

To do this, you will have to be working with familiar tools. Your camera, lens, plates or films, and developer should all be tried and proved, so that you will know just how to handle them to produce any desired effect. So, test everything carefully and become thoroughly familiar with the lens and plates before using them in unknown surroundings. You will then have only the new light, and the different character of the landscape as unknown quantities, and can concentrate your thoughts on the selection and composition of your pictures, knowing that the lens and plates will record them as you see them. Besides, there is always a chance that something is wrong with a new outfit. In a film-camera, the focusing-scale may not be placed correctly. In a plate camera, the groundglass may not be the same distance from the lens as the plate in its holder; and there may be leaks.

The very first question that presents itself in an article of this kind is whether films or plates should be used, and I am going to answer it by advising you to use both; but I consider plates better when it is convenient to use them. With either plates or films, it is necessary to use a tripod at times; but with an orthochromatic plate, very good work can be done with a three-time filter, but with films, a filter must be used which increases the exposure from ten to twenty times. This makes photography in the fields and woods very difficult on account of the constant breeze. Also you know just where the surface of a plate is, but films never lie perfectly flat. These things all count when making small negatives which are to be enlarged. Many good landscapes can be made without a filter where the clouds are unimportant; and, as films score so heavily on the points of portability and day-light-loading, they are frequently the only thing practical to use on a trip where many exposures are to be made.

For landscape-work during the summer-season, films have other advantages, as they will stand as much wash-water at 85 deg. F. as any plate made. We can, where ice is available, regulate the temperature of our developer and fixing-baths; but the wash-water has to be used as it is. This makes the use of double-coated plates impossible, at times, and where a non-halation medium is desired, roll-films will answer the purpose satisfactorily.

For good results, your plates or films must be



BY THE ST. JOHN'S RIVER
W. N. KINCHELO



AT THE EDGE OF THE FOREST

W. X. KINCHELOE

orthochromatic. You will find that even the simplest scenes, such as a clump of palmettos, which, if the light comes from the right direction, looks so fresh and green, and stands out so vividly from its background of earth and trees, will photograph in a distressingly flat manner on a plain plate. An orthochromatic plate will render the same scene with beautifully crisp definition and contrasts.

The characteristic features of a Florida landscape are the moss-draped trees, vivid color-contrasts, a blue sky with light, fleecy clouds, and a light that is bright but soft. It is this quality of the light that makes the difference between Florida and the southwestern states. Palms and moss are to be found in California and other southern places; but the quality of the light makes a great difference in their appearance. To picture these things truthfully frequently requires a color-screen, and that usually requires a tripod on account of the lengthened exposure necessary.

With orthochromatic plates a three-time screen is the most useful. I use the Burke & James Ingento Filter, series "A" with the Standard Orthonon Plate for virtually all my landscape-work when I use plates, or rather when I make a picture that requires a filter. Where a filter is not necessary, I frequently use roll-films for reasons of portability and the convenience of loading in daylight, as I sometimes make a large number of exposures on a trip.

The use of film-packs is not recommended at all if enlargements are to be made from the negatives. The air here is moist. It is really this moisture that makes the light so soft and vibrant; but its effect on a film-pack is unfortunately to soften it also, so that there are always lines from pulling out the tabs, and during the warm days of summer their use is simply impossible. Your camera, of whatever type, should be fitted to use roll-films when necessary.

The camera that I use for most of my serious



A FLORIDA BROOK, MIDSUMMER

W. X. KINCHELOE

work is a Seneca No. 9, $3\frac{1}{4}'' \times 5\frac{1}{2}''$, and I have made an extra back for it that takes the $4'' \times 5''$ Graflex roll-holder. The focal plane of this roll-holder is different from that of the plate-back, so an extra focusing-scale had to be made and attached to the camera-bed. A focusing-panel with groundglass was also provided. I can then use this outfit just as I would a Kodak, adjusting the focus with the scale, or use the groundglass to compose the view and focus when desirable.

One of your greatest disappointments will come from the pictures of orange and grapefruit trees when loaded with ripened fruit, if the right materials are not used. To the eye they are beautiful: the gleaming, bright yellows and oranges of the fruit contrast so agreeably with the bronze-green of the foliage; and then you may have an opportunity to picture them while the trees are loaded with fruit, and also in full bloom. An ordinary plate here is useless, as it will render the fruit and leaves in very nearly the same tone. An orthochromatic film gives a decidedly better rendering. However, the best results will be obtained with plates.

The Orthonon is good, and the effect is better if used with a filter; but for this work, I consider that Cramer's Medium Isochromatic with the series A or B filter gives the result most nearly approaching in monochrome the effect of the tree

as we see it. Some of the special commercial filters used for photographing oak-furniture may be better; and a panchromatic plate may also be better, but I have not tried them and cannot recommend them from my own experience.

In using films, it is best to use the color-filter made by the Eastman Kodak Company for that purpose, although the Burke and James series B filter does very well. It is, of course, necessary to use a tripod when using these filters, although the kodak sky-filter can be used for snapshots of a well-lighted landscape with open foreground using a stop of F 8 or F/6.3; and snapshots of seascapes can be made with the regular filter when conditions are favorable.

If your camera is a Graflex, or other reflecting-camera, you will find it suitable for 90 per cent of the work here. These cameras are not very satisfactory for use on a tripod, and for that reason they are not the best camera to make pictures of orange-trees; although if you have a steady hand, an exposure of one twenty-fifth of a second on a fast orthochromatic plate, using a three-time filter, and an F 6.3 stop will give you good negatives if the trees are in bright sunlight as they should be; for it makes the fruit look brighter and stand out in the picture better.

The only other place the reflecting-camera will cause you trouble will be in making pictures

in a dense shade. The sidewalks, for instance, in many of the towns, are lined with massive, old oaks; and these with their garlands and festoons of Spanish moss hanging from every branch will probably be the first thing you will see and want to picture when you arrive. If you will notice, the shadow-sides of those tree-trunks are very black, and the shade underneath very dense. A snapshot at F/8 is going to give you very nearly clear glass in those parts of your negatives. If you do not wish to use a tripod, the best thing to do is not to try to fill your plate with the picture; but back away from it until the picture as you want it fills a 3 x 4-inch space if the camera is a 4 x 5; then open up the lens to F/5.4 or F/4.5 and make the exposure. This is, of course, done to gain depth in the field of sharp definition.

If you are a nature-lover and want scenes away from the beaten paths, the woods will be filled with constant surprises for you; but they cannot be pictured with snapshots. The pine-woods are open and snapshots there are all right; but I refer to what are known as "hammocks" here, dense growths of hardwood, some large and some small, where the foliage is so heavy that in some parts there is no sunlight at all. The ground is wet in the lower parts, there are little brooks flowing through with ferns on the banks, and the foliage is so dense, and the branches so low that the moss almost touches the water in the brooks.

The importance of this Spanish moss and its effect on the Florida landscape can hardly be overestimated. It will appear in virtually every picture that includes trees and sky; it gives character to the landscape, and yet it is influenced by its surroundings. In a bright light, it is bright and gay; in the shade, dreamy, pensive, almost brooding; and, in the dense woods, where it is dark and damp, the moss is dark and heavy, giving a feeling of mystery and sadness.

We all know that it is impossible to picture a landscape that we do not understand. Florida with its moss must, therefore, be loved and understood before it will impress its character upon your plates.

Photographically or technically, the handling of this moss is one of the most difficult problems I have undertaken. It can be made the point of interest, the theme of the picture, or it can be subordinated by letting it take its place in the background; but in either case, it is hard to picture it so that its effect is true. In the first place, the moss appears to be gray in color; but upon closer examination, it is seen that there is really considerable green in it; and, as it is much lighter in color than the foliage of the trees, it stands out from the background beautifully. In a photograph, however, unless the work is done properly,

all its brightness and light, fluffy character seem to disappear, and it is reproduced flat and heavy.

One of the best ways to overcome this difficulty is to photograph it against the light. The tree-trunks and branches then appear heavy and black, but the moss as it is partly transparent, has the light shining through it, and every minute detail will show up beautifully silhouetted against the sky. A double-coated orthochromatic plate should be used. Another way is to arrange so that the trees in the background are in shade; but some prominent festoons of moss in the foreground receive the direct sunlight. This is one of the best methods to obtain the effect of moss in sunlight, and also reproduce the background well.

One might infer from the prominence I have given orange-trees, moss and jungles, that they are all that Florida has to offer in the way of scenic beauties; but this is by no means the case. As the state is a narrow peninsula with the ocean on one side and the gulf on the other, there are hundreds of miles of beaches with their opportunities to make every kind of beach-study from surf-bathing to sunsets; or from sail-boats to jungles of palm and cypress that seem to be trying to wade out to sea.

The beaches all have glistening, white sand which changes color near the water's edge; and the contrast between the white sand, the azure of the sky with its fleecy clouds, and the ultramarine of the sea with its froth-tipped waves is beautiful, and affords one an opportunity to exercise some rare discrimination in the choice of plates and filters. Do not overdo it as some have done, for those spectacular, posterlike effects in clouds, although easily obtained by using too deep a filter, are not artistic, and are not true to nature. For this work, I recommend the Orthonon or Cramer's Medium Iso plates with the Burke and James series A or B filter according to the effect desired.

The interior of the state is dotted with thousands of lakes; and the roads, as they pass through the pine-woods, orange-groves and "hammocks", will lead you to pictures of every variety. Sometimes, the tops of the trees on each side of the road will meet, and the long streamers of moss hang so low that you can almost touch them with your hand. When the light is right, the effect is so striking that you can hardly believe you are in the same world that you have always inhabited.

Then, at the next turn, you may come to an open country where five or six lakes may all be viewed from the same spot; and they also, as they gleam in the mellow sunlight, remind you that man has never done anything like this. Man has, however, striven valiantly, as witness

the many beautiful homes and large estates, where everything that art and money can do, in the way of magnificent buildings and landscape-gardening with tropical plants and flowers, has been done. But I find my pictures among the trees and along the rippling brooks.

From the above, it may be inferred that a reflecting-camera is very nearly ideal for a great part of the work to be done here; and its advantages are so many as to very nearly compensate for its shortcomings when working in the densely shaded spots; for not every one cares to prowl

tives of a subject in the shade, and foggy, flat negatives of a brilliantly illuminated subject, some that will not work against the light, some that have a flat field and the definition is nowhere sharp, some that are beautifully sharp in the center of the plate and out of focus in the corners, and some that are almost everything that you want a lens to be.

If you are using a reflecting-camera, you should have an F 5.4 or an F 4.5 lens. From personal experience, I can recommend only the Bauch & Lomb Zeiss Tessar, Cooke, or the lens mentioned



LIGHTHOUSE AT MAYPORT

W. X. KINCHELOE

around in the jungles. The best type of reflecting-camera is one with a reversible back and rising-and-falling front.

As lenses vary so greatly in character and quality, an article of this kind would not be complete unless some mention were made of the types best adapted to use here. The lens with which I do the greater part of my work is a Rodenstock's Eurytar lens F 5.4 of seven-inch focal length, and mounted in an Optimo shutter. This is a cemented lens and is convertible, which gives me a choice of three focal lengths. One reason that I chose this lens was because I make a lot of exposures against the light, and this lens does that well, a thing which cannot be said of all anastigmat lenses.

I have owned only six anastigmat lenses, and have used a few others at times, so that I have no personal knowledge of many of them. This I will say, there are lenses and lenses, some good, and many poor, some that will give crisp clean nega-

tives. There may be other lenses as good or better that I have had no opportunity to try.

For a camera of the type of my own, use a good rapid rectilinear or a good F 6.3 or F 6.8 lens; and I, personally, would rather use a good rapid rectilinear lens than many of the cheap anastigmat lenses that have flooded the market during the last ten years. For film-cameras, there is no advantage in selecting a convertible lens; but the choice should be made as carefully as in the case of a plate-camera. From personal experience, I will say that the Goerz Dagor lens is excellent for landscape-work, and will do almost anything that it will be called on to do. My own lens was selected after trying several others.

I have never owned one of the soft-focus lenses as I do my diffusing, when desirable, in making the enlargement. The light here is much softer than in the higher, drier country back north, so that it is almost impossible even with a fully corrected lens to make the "east-iron" type of nega-

atives that are so easily made there. Personally, I want a lens that will render a scene before me just as it is. If I want that gray, misty, atmospheric effect, I make my exposures early in the morning when the mist is there. Let me state here that some wonderful pictures can be made when the sun is just breaking through the mist in the early morning. However, they should be usually foreground-studies.

The size of the camera is a personal matter entirely, as I consider anything from $2\frac{1}{4} \times 3\frac{1}{4}$ inches to 4×5 inches or postcard-size suitable. However, the proportions of the 4×5 are better. A $2\frac{1}{4} \times 3\frac{1}{4}$ print is not impressive; but the negatives enlarge well; and I usually have a little Ansco vest-pocket camera of that size with an F/6.3 lens tucked away in my pocket; and,—this is confidential,—it has sometimes made better pictures for me than I made with the big camera. As I do not mind carrying a heavy camera, I prefer a 4×5 ; but, if I were selecting a reflecting-camera with revolving-back and rising-front, a $3\frac{1}{4} \times 4\frac{1}{4}$ would be my choice for landscape-work.

You can, of course, have your plates and films developed by the local "finisher" if you wish; he does just about as good work here as anywhere else. Personally, I am not going to spend a whole day, and walk miles and miles making exposures, some of which I am just sure will make me the greatest landscape-artist that ever lived, and trust the development of those negatives to any one else. Would you? Bring your tank and trays; the hotels, even in the small towns, have electric lights, so bring your electric safe-light and develop the films or plates yourself as often as convenient.

You know that in an article, such as this, not much can be said about exposures. I use the Burroughs and Welcome "little red book", have been using it for years; and, if you are used to it and know how to classify your subjects, it is the best guide that I know of. In fact, if a beginner will study that book, use his head, and

make his exposures accordingly, his work will not show that he is a beginner. I usually value the light as B unless the sun is unusually bright; and in the plate-speed table with my shutter (Optino) I use column two. In the light-value table, use the table given for thirty degrees north latitude.

To make negatives successfully during the summer-season, it will be necessary to use developing- and fixing-baths prepared specially for hot-weather work. The developer should be one that works rapidly without fog, so that the emulsion will not be softened. It should give good contrasts without blocking the highlights. Amidol will be found to answer these requirements nicely. The fixing-bath should contain a generous quantity of chrome alum to ensure that the negatives are properly hardened. As it is much cooler at night than during the day, it is better to do one's developing then; as, aside from the solutions being cooler then, it is much more comfortable to work in a large, airy room at night than to be confined in a close, and probably hot, darkroom during the day.

To be on the safe side, it is better to bring your films and plates with you. Those who use the most popular sizes of roll-films can be reasonably sure to obtain fresh films, especially when purchasing them from the small stores which order in small quantities. Plates, however, are usually considered as professional supplies, and are not stocked at all by most dealers. Here in Jacksonville, they are carried by only one dealer who has none at all in his retail Kodak department; but carries a stock in a separate store for the professional trade. However, the choice of brands and emulsions is very limited, and he does not carry any orthochromatic plates in sizes smaller than 4×5 , and I believe only one brand of that. So, to make sure, I would advise you to bring with you what you can conveniently carry in the way of supplies, and order the remainder from some reliable dealer in the higher, drier country of the North.



Increasing the Efficiency of the Graflex

LEHMAN WENDELL



FOR a number of years I have been interested in photographing minute objects, especially insects. For this class of work I at first employed an imported Ica Ideal III camera because its unusual bellows-extension permitted close-up work. Later, I added an Auto Graflex Junior to my equipment; but found upon casual inspection that it was not suitable for small work. I thereupon addressed letters to the Eastman Kodak Company, to the Bausch & Lomb Optical Company, and to several other

trait-lens will shorten this distance to $14\frac{1}{2}$ inches. In order to shorten the distance still more, I had a lens-tube made similar to the one shown in the illustration. This shortens the focal length to $12\frac{1}{2}$ inches, or with portrait-lens to $9\frac{1}{2}$ inches. The field is fully covered.

I believed that I had solved the problem, and that I could now photograph anything from a flea to a flivver, and I was eagerly waiting for a bug-hunting day in the wilds of a Minnesota meadow. The day finally came, and with it keen disappointment. I found an ugly caterpillar



LENS-TUBE

LEHMAN WENDELL

lens-manufacturers, asking them if it would be possible to use a supplementary lens with the Auto Graflex Junior so as to shorten the focus sufficiently for close-up work. The reply in every case was that nothing could be done to shorten the focus of the Graflex lens, and several letters suggested that I use a different type of camera for my minute work. That, however, did not appeal to me because, when a man goes afield, three cameras are too too many—unless he is blessed with as many arms as a centipede has legs. Of course, I realised—even with my limited wisdom—that no camera can be made to serve all photographic purposes, and yet I was very desirous to limit myself to the Graflex Junior camera.

The main trouble with my Graflex was that the bellows-extension was insufficient for my work. When fully extended, the lens can be brought into focus with an object 20 inches away. An ordinary supplementary Kodak por-

and asked him to pose for the Society Column of our leading daily. I tried the Graflex with extension-tube and portrait-lens in place, and discovered that the image was too small, the worm looked like a hair in a plate of soup. I began to wish for a length of stove-pipe to take the place of my short lens-tube, or for a ten-foot gas-pipe, or for anything that would enable me to bring the lens far, far from the offending camera, and I asked myself many a time, "Why doesn't George Eastman provide every camera with bellows the length of a cow-hide?" I was pretty much disgusted with all cameras in general, and with my Graflex in particular.

At this point, in sheer desperation, I unscrewed the front-element of the lens just to see what effect it would have upon the groundglass. I expected to see something fuzzy and out of focus; and I was not at all mistaken in my expectation, for the image looked like a sand storm in the Sahara Desert. I brought the camera a little



A SPECIMEN PHOTOGRAPHED

LEHMAN WENDELL

nearer to the caterpillar, and there was a decided improvement. I brought it still nearer, and yet a little nearer, and, finally, when the camera was but four inches from the caterpillar, the image was as clear-cut as if he had been a two-humped dromedary and I had been a—I mean twenty feet away from him. To be sure, all planes of the picture were not in sharp focus at that short distance; but that was easily remedied by stopping down.

I wondered if I had made a new discovery, or was it general knowledge that the rear-lens could be used independently on the Graflex Junior? We know the catalogs say it can't be done. The next day, I stepped into a large Kodak store and asked the chief clerk if there was any known means of shortening the focus of a Graflex so that insects or other minute objects could be photographed. The answer was what I had expected, a decided "no." He didn't notice the twinkle in my eye when I asked him if it wouldn't be possible to use the rear-lens alone. He answered as before, and his reply carried with it such a compassionate grin because of my ignorance of lenses, in general, that I almost wilted in my tracks. I finally recovered sufficiently to produce the insect-picture shown in these pages with the information that it had been made with the rear-lens and that the insect had been only four inches from the camera. Mr. Man's eyes bulged out like loose overcoat-

buttons, and he became undignifiedly hilarious. "That's a selling-point!" he exclaimed, "by George, if it isn't!"

I began to wonder what the Eastman people knew about my discovery, so I addressed the following letter to the Folmer & Schwing Department:

Is there any way of shortening the focal length of a Graflex Junior camera so that minute objects, such as insects, can be photographed? Is it possible to use the rear-lens for close-up work?

A reply to my letter came in due time and reads as follows:

... you must be under the wrong impression regarding the focusing of small objects, such as insects, as for close-up work you really need a longer bellows instead of a shorter one; but of course this is out of the question with the Graflex Junior. It is possible, however, to focus up to within 24 inches [20 inches is correct, L. W.] of the subject as you will find by experimenting.

We do not recommend the use of auxiliary attachments with high-grade anastigmat lenses, and the lenses regularly fitted on these cameras are not of the convertible type so as to use the rear-combination of the lens. The only Graflex to which we fit convertible lenses is the R. B. Auto.

Well, what about all this? Have I made a new discovery or haven't I? That remains for each Graflex-owner to determine. Meanwhile, I send this little message to the Knights of the Black Box in the hope that it will serve a useful purpose, and that it will enable them to capture photographically many an ugly bug.

Before closing, let me add a word of warning. Most amateur photographers have learned to their dismay that, when working very close to an object, the perspective becomes greatly exaggerated; and, if portraiture is one's objective, the result will usually be failure. However, violent perspective does not always spoil a picture; there are times when it merely adds to the interest. Those who have seen Fairchild's "Insect-Monsters" know that much of the interest in his pictures lies in the greatly exag-

gerated perspective. In fact, close-up work will add interest in many ways; but experience will have to be the judge as to when to employ it. I am of the opinion that for photographing bugs, minute flowers, fungi, lichens, etc., the rear-lens of a Graflex will give us just what we want; and when we want to photograph big bugs, like Harding, Hoover, Lenin, Trotsky, all we have to do is to screw on the front-element, catch the right moment, the right lighting and pose—and the bug is ours.

A Convenient and Easily Made Darkroom-Lamp

A. H. CANDEE



TH present-day conveniences in photography, especially the film-tank, many of us may pursue our camera-hobby for years without experiencing any great need of a darkroom and safe-light. Such was the case with the writer until he happened recently to acquire an old plate-camera and wished to try out its capabilities. Then, of course, one of the im-

mediate requirements was a safe-light to fill plateholders and develop plates. The price asked by the photographic dealer for a small, painted tin-box with a ruby-glass slide seemed unnecessarily high, and it was decided to improvise the required darkroom-lamp at home.

The result is shown in the accompanying photograph, and was so entirely satisfactory that a brief description of the lamp may be

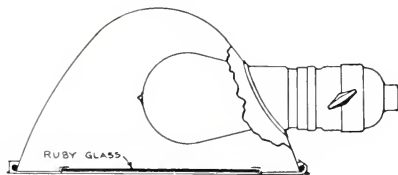


FIG. 1

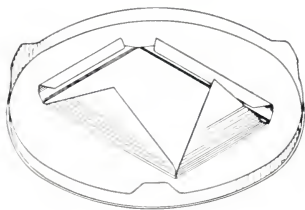


FIG. 3

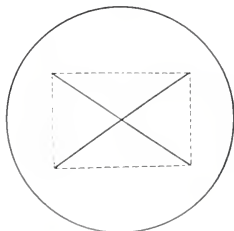
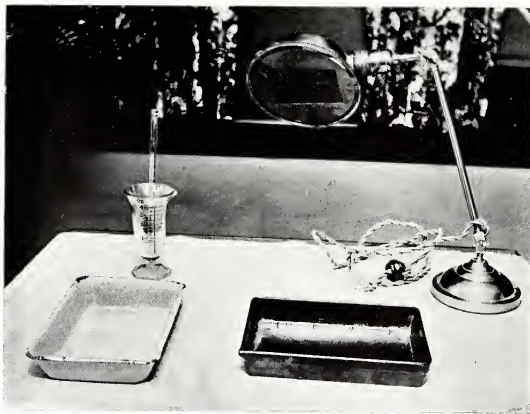


FIG. 2



READY FOR BUSINESS

A. H. CANDEE

interesting to other camera-workers. Figure 1 of the drawings hardly needs an explanation; but a short account of the actual method of construction may be helpful.

The only part which had to be purchased was the ruby-glass slide for a Brownie Safelight Lamp. The lamp actually used was one which had been in the home for some years, and will be recognised as a common and inexpensive type of adjustable electric lamp. The essential part of the lamp, however, is the reflector-shade which is a standard article obtainable at any electric supply-store. It is obvious that any kind of a support could be used or that the shade and socket could be simply suspended by the wire.

A short search about the house furnished an old, round, tin-box of just the right diameter to fit the front of the lamp-shade. The box, by the way, was one in which an oiled mop for floors had been purchased.

With an old pair of shears the side of the box was cut down to leave a rim around the bottom about $\frac{3}{8}$ of an inch high, thus forming a round cover as shown in Figure 3. Three ear-shaped extensions were left on this rim to attach the cover to the lamp-shade. A rectangle just a little smaller than the ruby-glass slide was marked on the cover, see Figure 2, and the diagonal cuts indicated were begun with a can-opener and finished with the shears. The four triangular

flaps were then bent up in the manner shown in Figure 3 and folded straight back to form a rectangular hole. The folds in the tin at the edges of the hole were pounded flat all around. Then the flaps were bent up again, trimmed off, and formed into clips to hold the glass-slide in place. The tin was quite thin, and this was all done very easily.

By bending in the three ear-shaped pieces around the rim of the cover, it was easily attached to the lamp-shade, and the job was complete except for winding some tape and string around the base of the shade where it fitted onto the lamp socket to stop the leakage of any light at that place. The time required to complete the lamp was less than two hours, and the result obtained was found to be well worth the effort expended. The safe-light made as described is of very convenient form and neat appearance. The accompanying photograph of the completed lamp was made as follows:

Artificial light, three 25-watt Mazda lamps in alabaster bowl, about four feet above table; 15-minute exposure; rapid rectilinear lens, F/16; Seed Gilt Edge 30 plate; Premo 4 x 5 plate camera.

[There are many things useful to the photographer who does his own developing that the average handy-man can make himself if he will use due care in the planning and construction of such articles.—EDITOR.]

“Kodak As You—Stay!”

WILLIAM LUDLUM

NOT very long ago a friend of mine dropped in to join me in a friendly pipe and to have a social chat. I had been browsing through a lot of my old vacation-prints, with the thought of my anticipated summer-outing in mind, and they still lay in heaps on the hall-table. My friend, who happens to be one of those unfortunates whose business requires constant and

large measure contradicted by my prints, mostly all of “foreign” extraction. I fell back upon the time-worn argument that “familiarity breeds contempt”, indicating the self-evident truth that a thing of beauty, when seen every day, loses its sense of novelty. I insisted that looking too often at any certain object often resulted in either *over*-looking or not seeing at all.

To all this, my friend only shook his head in



THE RAILROAD-STATION

WILLIAM LUDLUM

serious attention—when almost everybody else under the sun is hitting the trail in search of rest and recreation—picked up a handful of prints and began to look them over. During his inspection, he made a remark which “stuck in my crop”—long after he had departed for his own home-roost. He generously complimented me upon the beauty and excellence of my print-collection, but qualified his praise by saying, “If I only had your opportunities of traveling about, once in a while, I might make some good pictures, too; but I am tied down so much by business that I never manage to find time enough to get away and, as there is nothing in town worth photographing—I just don’t try.”

I endeavored to convince him that he was very much mistaken, by pointing out that objects of real beauty were often to be found right at home; but met with poor success, being in a

unbelief, exclaiming, “You’ve got to show me!” And then he clinched his argument by saying, “Why, even the Eastman Company advertises, ‘Kodak as you—go.’ They don’t say a word about kodaking and—*staying*. It’s go, go, go! and, as I can’t go, I can’t kodak!”

The matter, for the time being, ended there; but I made up my mind to take up his “show me!” and prove to him that he was wrong, dead-wrong. I was determined to show him that his right of way was the wrong way; but to do this, I found that I had to correct in myself the very fault that I accused him of—the “eyes that see not.”

About the first object that greets my sight each morning, when I open the front-door, is the white pergola in the garden opposite. At this early hour the slanting rays of the rising sun just kiss the tips of the roof-beams, bringing them out in sharp relief and leaving the



A BIT OF ROSE-LAND

WILLIAM LUDLUM

background and surrounding foliage bathed in an illusive softness—an atmospheric effect entirely lost later in the day. The first morning after my doubting neighbor's call, I tiptoed across the street as gently as possible, so as not to awaken the owner of the pergola, and "snapped" it as exhibit, number one, in my exposition of kodaking at home. On my return to the house, I paused long enough to study the snowball-bush, in the front-yard next door; but decided to put off making an exposure of it until later in the day when the white porch would be in the shadow, selecting an hour when the direct rays of the sun concentrated on the bush to make it the chief point of interest—the only highlight in the picture. This I did, photographing it from my front-porch, for a general view.

A short distance from my home, on the slope of a rather steep hill, is a stone wall crowned by a veritable cataract of climbing roses, Miss Dorothy Perkins, arrayed in all the freshness and beauty of her pretty spring-frock. On this same morn-

ing, as I tramped my way to the office, I delayed long enough to take certain photographic liberties with Miss Dorothy, a full-length portrait, "The Rose-Hill Walk", and a more intimate study, "A Bit of Rose-Land". The first is marred by the intruding shadow of the telephone-pole; but this could not be avoided. The weather-condition indicated showers, and I did not risk losing the opportunity to get Miss Dorothy while the getting was good. A few hours later, her rose-frock was ruined completely by the rain and wind, which proves that an exposure in time often saves the picture.

About a half-mile further on, I pass an old colonial house which, in the full sunshine, looms up as a glare of white, being anything but attractive, except as a pleasing example of home-architecture; but for a certain few minutes each morning stray sunbeams softly caress the columns of the porch, producing an effect both mysterious and beautiful in a marked degree. In this instance, the negative was underexposed, as my



THE WHITE BUSH
ROSE - HILL WALK
WILLIAM LUDLUM



THE PERGOLA



WILLIAM LUDLUM



OLD COLONIAL HOUSE

Kodak-lens is only an F 8 and the slowest shutter-speed 1/25 second; but by careful development and printing I have preserved the early-morning atmosphere.

My next attempt to produce a "show-me" picture was a shot at our local railroad-station. As a rule, such a subject has not much pictorial quality to recommend it; but by reconnoitering I discovered the only promising viewpoint. The old beech-tree with its accompanying long shadow in the foreground furnished a sort of decorative frame for the building, so unattractive in itself.

All these little views are of scenes that I pass and re-pass almost every day, and yet I really

never appreciated them until studied through the finder of my camera. My doubting friend has not yet seen them, and I intend to surprise him by showing them to him in the form of prints. When he views them, and reads this article, I am sure that he will agree with me that it is not necessary to "go" in order to "kodak." All it needs is an appreciation of the beautiful, a fair sense of balance and proportion, and a determination to make the best of the picture-material at hand.

"If you who read are one of those
Who cannot get away—
Just 'buck up' to the job at home
And kodak as you—stay!"

Atmosphere in Photographs

WALTER C. O'KANE



Y friend John, the artist, was at work in the Sandwich Mountains, those ragged outposts of the White Mountains in New Hampshire. I was spending occasional hours with him, watching him paint, trying to school my eye to see the subtle and fleeting shades that his trained vision caught so readily, and enjoying the fine pleasure of observing the re-creation in pigments of the shimmering landscapes before us.

Clearly my camera was in a plebeian class when compared with such creative work as this. Nevertheless, John proposed that we spend the next morning together, composing some mountain-studies on the groundglass. We planned to go to Whiteface Intervale, where a setting of nearby, wandering stream, mid-distant trees and remoter summits had caught my friend's fancy.

In the night, a film of smoke from northern forest-fires crept down over our country. In the morning, when I looked out, the air was filled with a translucent, bluish-brown haze and faintly pungent with the breath of the far-away blaze.

I sought John.

"Rotten day for making pictures," I suggested. He looked about. "Fine day; just right," he said.

We proceeded to the Intervale and made our way along the bank of the stream, trying this and that point of view and now and then finding a setting that pleased John's eye. To my notion, we were at a hopeless task. Instead of standing out clear and distinct, the mountains that rim the valley were only a suggestion. One could make out nothing of their details. The bold, bare ledge on Whiteface, where the slide swept down a century ago, was no more than a faintly

lighter spot in the mass. Spruces which crowned an approaching ridge disclosed none of their stiff spires, but blended into a mysterious, dark mantle. Elms in the middle of the valley before us held up soft, rounded outlines against a tawny back-drop of tenuous haze.

"We can't get any good pictures to-day," I insisted. "Wait and see," suggested John.

Next day we developed our plates. When they were fixed and dried, we looked them over. They appeared to me dismal failures—fuzzy and dim. John was delighted with them. He picked out two or three and we sent them away to have an enlargement made from each.

That night it rained, and next day dawned brilliantly clear. Without saying anything to my friend, I went back to the Intervale, set up the camera again and made another set of plates. The mountains had come back in all their detail. One could see each ledge and slope as if it were almost within arm's reach. Through a gap to the west, more distant ranges stood out, distinct, clear-cut, apparently no farther away than the foot-hill just across the Intervale.

"This is the kind of day for pictures," said I to myself, and thought with regret of the failures that we had carefully studied and composed the day before, wishing that my artist friend could be on hand now. I developed the plates and made a print or two.

In a few days, the enlargements from the smoky-day negatives arrived. I took the package up to John and we unwrapped it. One of them was done in sepia. When we set it up before us, a first, faint understanding began to dawn on my brain. That picture was the very day itself.

re-created—hazy, mysterious, languorous. One could almost smell the smoke of those forest-fires. The little woods and the elms had an identity and a character all their own. They were no longer lost in the mountain-mass behind them. The mountains had receded into the distance, where they belonged. You could see that distance—appreciate it. You could see the air!

"Why, there's air in that picture!" I exclaimed. "Yes," said John, "or perhaps you might better call it 'atmosphere.'" And he added, "It's worth seeking in your pictures."

When we compared the negatives obtained on the smoky day with those on the clearer day, it was difficult to realise the superiority of the former. By our accustomed standards, the latter were by all odds the better. They had sharpness and clearness. They indicated that the camera had been accurately in focus and the exposure timed to secure proper gradations between light and shade. Distant details were minutely visible. If one were to take a magnifying-glass and examine the film, one would be able to make

out the minutiae of remote points, as in a telescope. By comparison, the negatives that represented the artist's selection were poor excuses. Yet in the finished prints, there could be no doubt as to where the superior merit lay. John's pictures had a charm, a quality that the other totally lacked. They were not merely something to look at—a certain admixture of valley and hills, like so many specimens brought together. They possessed feeling, and they were able to carry that sensation into the consciousness of the beholder.

At the beginning of a sojourn in England, John Burroughs wrote: "There is an unexpected and unexplained lure and attraction in the landscape—a pensive, reminiscent feeling in the air itself. Nature has grown mellow under these humid skies, as in our fiercer climate she grows harsh and severe."

Perhaps, after all, we possess over here something of these mellow qualities, if we seek them, as did my friend, the artist.

Boston Evening Transcript.

Autochrome Plates and Color-Perception

DR. THIEM



WORK with autochrome plates having perforce had to rest for some years; they may now be taken up again; the high cost of the plates, however, warns us to practise extreme economy, limiting ourselves to really valuable views and utilising in every possible way technical aids and knowledge.

Photography with filter-plates is, from a purely technical point of view, much simpler than with black ones, because the number of ways of treating these plates from the moment of exposure to finishing, is extremely limited. If one has learned to develop them by transparency, it is well to continue following that method as far as possible. It is more difficult to acquire the correct time of exposure, which lies within narrow limits; but even this can be learned with comparative certainty with the aid of a good exposure-meter. On the other hand, the mastery of color-rendition, in which, besides experience, good taste is necessary, is not easy. It may perhaps be taught, but not learned; but it is specially necessary in making color-photographs, for we are sensitive to breaches of correct taste owing to our familiarity with the master-works of painters of all times, whose chief charm lies in their individuality and close adhesion to nature. But it must not be overlooked that the technical aids that tend to

render black-and-white photographs too realistic without increasing their artistic value, but emphasising the personal stamp, are entirely absent in the autochrome. And yet they might be of great enjoyment to us if the subject and point of view are well selected and the coloring is pleasing. This latter will be controlled by the filter.

In transferring the colored view we see on the groundglass to a one-color reproduction we need a filter to correct the errors due to the difference between the impression on the eye and the reproduction of the light-values on the plate. It may be said that this task is now solved technically, because filters are calculated and made to suit every plate, and will produce the nearest possible approach to the ideal reproduction of the tone-values.

Much greater are the demands made on a filter for autochrome plates, for there must be a most careful gradation of the filter's absorbing capacity upon the curve of sensitiveness of the panchromatic plate in such a way that a neutral gray scale will in daylight have a pure gray appearance without a trace of color.

One might think that a filter suitable for medium daylight must also give correct values with varying light and that the character of the lighting must be recognisable on the plate itself. Comparative exposures, however, under widely

A NEW HAMPSHIRE VALLEY



WALTER C. O'BANON

different lightings quickly teach us that only within very narrow limits is it the case, and that there is a difference between the color perception of the eye and the reproduction of the color-plate. The latter works merely according to physico-chemical laws, but with the eye physiological appearances also play an important rôle.

How greatly the colors of daylight and those of artificial lights differ from one another can be observed to best advantage during evening-twilight in the streets of a large city. When the lamps have just been lighted one can see blue-violet daylight; violet, milk-white and yellow to reddish arc-lights; yellowish red incandescent lights, and greenish gas-lights intermingled. And yet by each separate light-source alone, white paper looks white; but if we expose autochrome plates with a normal color-filter under the various lightings the paper will not appear white, but tinted with the peculiar color of the light under which it is taken, so that we are obliged to use a special filter for each source of light if we would not have untrue pictures.

The question now arises, upon what reason is this difference between eye and plate based? and further, are the changes in the composition of the daylight so great that they cannot be overcome by a single filter?

The answer to the first question lies in the effort of the eye to modify the effect of strongly lighted objects both as regards intensity and with reference to the variation in the color of the white daylight. For the modification of the brightness of the object in the field of view the eye possesses a special apparatus—the self-acting diaphragm of the iris-membrane, which becomes narrow in bright light and widens in weak light. By it we are enabled to recognise the details of the parts of a church in brilliant sunshine as well as those in the twilight of the shaded portions, because we perceive the whole field of view a part at a time consecutively with a rapidly varying width of the pupil, leaving a picture of the whole in the memory. Of course the camera lacks this power of adaptation and the plate must give a much harder delineation than that seen by the eye, and under such unfavorable circumstances as here described we are obliged to imitate by skilful handling the impression received by the eye.

A similar equalising-effect takes place to a certain extent in our perception of colors, since variations in the color of daylight for a long time were not felt to be so harsh as the autochrome plate depicts them with merciless truthfulness, because the eye in a short time adjusts itself to the color of the lighting.

If with a normal filter we take an autochrome

picture of a rose-colored orchid in rainy weather and another in the warm light of the setting sun, we will have in the first case a flower shading to violet, and in the second one verging on lake-red; without doubt, however, the flower at the time really had the appearance reproduced. On examining the pictures without explanation regarding the circumstances of lighting, we would conclude at once that in the first case a violet and in the second a red flower were taken; but on looking at the flower itself we see its proper color behind its changed appearance at that time, produced by the light, and we will not be far wrong in giving what is its actual color, because we have learned from long experience to judge how the flower would look when seen by white daylight. We possess, therefore, in our mind a certain color-representation to which we refer its appearance.

Let us here make a slight digression in the world of musical tones. A tone in the first place is recognised by its pitch and is so constituted that persons with a fine musical ear can give its name immediately. They feel unconsciously, yet with perfect certainty, the key in which an orchestra is playing, by which through the key-note the foundation is given upon which all sensations are formed. The harmonies or their opposite effects are not destroyed by transposition into another key, so that persons with a poor musical ear cannot distinguish whether a piece which they know in the original key is transposed, while an educated musician has no doubt about it.

Returning to our colors, we will see that here also there is a reference to a fundamental sensitiveness, which, however, cannot have an absolute character, because it depends not on one condition, but on two. What is it that calls forth the color-impression? It is the manner in which the light striking on an object is thrown back; a portion is reflected, another portion is thrown back diffusely, still another strikes into the interior of the object, is broken up and is partly absorbed, and a part of the absorbed light turns back from the interior again. This play of light that, taken as a basis, is indicated by a pair of dry physical coefficients, gives us the impression of a body, but is entirely dependent upon the nature of the light falling upon it. A black body is one that absorbs a great deal of light without preference for individual rays; a white object is one that throws back, also without preference, the larger part, for which reason white surfaces always reflect the color of the light falling upon them. The other colors are just as dependent upon the lighting, but the percentage of reflectibility of the individual colors in the mixture of light falling upon the object does not differ

greatly, so that the color in general is somewhat out of place; but with artificial light it is only in exceptional cases noticeably changed, at least to the eye. The colors of bodies are therefore dependent firstly upon the physical form, but secondly also upon the color of the light falling upon them, so that the appearance constantly fluctuates with the changing color of the daylight or artificial light.

What, then, is the color a body possesses—its proper color? It is that which it shows in white daylight, by which our feeling for white apparently fixes itself indefinitely in the mind and is only strongly supported by the presence of and comparison with neighboring colors. So it may be somewhat difficult to say of a single sheet of paper that it is pure white, and a comparison with other papers greatly facilitates judgment. An unmistakable feeling of the sharpness of the absolute tone-sensation passes for color with us, which is not to be wondered at, as we seldom find ourselves in pure white light, as we will see further on, and because even the color depends upon the coloring of the lighting, to which are added a thousand other reflections from other colored objects, often without our being able to take account of their cause and action. A sunlit surface of leaves radiates a strong green light that breathes a greenish tinge on light wall-surfaces; in a room a lot of colored light-reflections shine through one another, covering all colors with others.

It may be further added that the eye is an organ that very quickly tires and comparatively slowly recovers. We are easily dazzled, and it requires considerable time before the eye is able to see clearly in a weak light; its usefulness lies within much narrower limits regarding everyday charms than those of the ear; only rarely do we experience noises that "dazzle" the ear. After the loudest trumpet fortissimo we can hear with equal clearness the soft tones of the harp, but in no case will the perception of tone-pitch be influenced by the preceding loud part. The eye, on the other hand, tires very quickly of color-impressions with a simultaneous increase of receptivity for the complementary colors. At the same time something else plays in that overclouds our color-perception, viz., the proximity of other colors. The field of view that is distinctly perceived by the eye is only about the breadth of the thumb-nail in extent, so that the eye is forced to pass over the entire field successively and the impressions thus received are connected in the brain as one impression. In so doing it passes from color to color, and a feeling of special fullness of color is produced by the appearance of fatigue. A white paper in a red

frame must for the same reason appear green. The effect of the circumstances mentioned is that our color-perception rests on a very uncertain foundation, and that there is a constant conflict between the appearance of an object and its "real" color, which is so charming for the painter, but which for the scientist makes the study of the color-problem so immensely difficult.

According to the foregoing we must, in judging of colors, always be informed on two points:

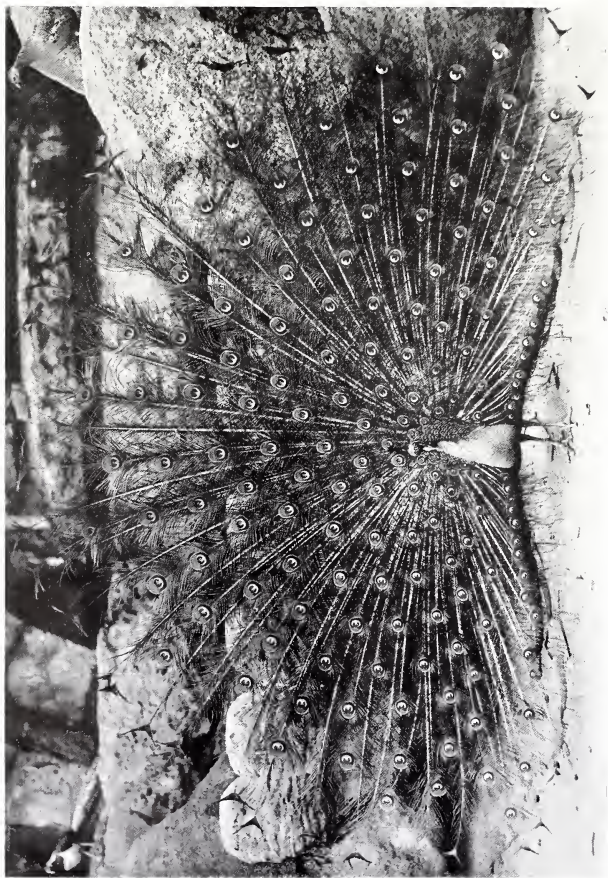
1. What color, according to experience, has the object in white daylight?

2. What color has the light falling upon it?

If we are left in uncertainty respecting one of these two conditions, our sense of color misses fire completely. In the red light of the dark-room, for instance, we are not in a position to distinguish between a red and a white paper.

The fixed point for us in this chaos is the appearance of a surface which we know to be white. If such a surface looks red, we know that the light falling upon it is red. If the color of the light is not very different from daylight, the knowledge that the surface is white so strongly overbalances that we feel it to be white even in colored light. If the difference is stronger, as in artificial light, it is due to being accustomed to the peculiar color of the lighting. In direct comparison with daylight the difference naturally appears unweakened, and a white tablecloth lighted by incandescent gaslight seems just as green as a color-plate with a normal filter reproduces it. If, however, we have become used to the light, the tablecloth looks white to us. Looking out from a chamber illuminated by incandescent gaslight, we see the twilight as a deep violet, because we suppose the light in the chamber to be white. A white sign above the sidewalk should likewise look like violet, but even when we are fully cognisant of the circumstances we feel it to be white. We are therefore enabled by experience to take account of the lighting and are able to a certain extent to transpose all colors, and in this can go quite a distance. Our artificial lights are sometimes strongly colored, but we are so accustomed to these lights that the changing of the altered color-values causes no trouble; indeed, we are even able to enjoy artwork with this transposing of colors. It depends not so much upon the absolute appearance of the body as on the relative reflecting-conditions, which in a certain sense are comparatively independent of the lighting. If a body reflects preferably the blue rays, it does this also with the scanty blue rays of a candle, and even when only a few such rays are present it reflects them preferably.

(To be continued)



Courtesy Boston Herald

IN ALL HIS GLORY

LESLIE R. JONES



EDITORIAL



The Authorship of Exhibition-Prints

IT has always been understood, and generally so, that a photograph exposed to public view is the personal product of the exhibitor, unless stated otherwise. If more than one person had a share in its preparation, it would seem at least fair that the names of those responsible for the completed work should be given as the joint authors. When the question is raised whether the exhibitor of an impressive collection of photographic prints in gum, carbon, bromoil or any other printing-medium did more than merely select the view, photograph it and develop the exposure plate or film, the excuse is made, sometimes, that it is enough that he appear as the author of the negative, directly or otherwise; it matters not who actually performed the mechanical work of developing the image and making the necessary print. Some critics go so far as to declare that the mere securing of the image entitles the exhibitor to complete authorship. In the case of a mere record, such an assertion would have no weight with most practical photographers. There might be some excuse for making such a statement, were the pictures conspicuous for the intelligent application of the rules of pictorial composition. Investigation seems to show, however, that camerists who have true artistic instincts, do not stop at making the exposures, but do their own photo-finishing.

For an individual—generally one of wealth and leisure—to purchase an expensive camera, snapshoot everything according to his fancy, and leave all the technical work to the skill of an accomplished photo-finisher is a perfectly legitimate procedure. But the moment the snapshooter claims credit for the enlarged print which is made, at his order, by a professional or even an amateur expert, he over-steps the limits of fairness. He would appear in a better light, were he to announce that the skilfully prepared print was the joint work of himself and the paid specialist. At least, he can indicate in some way that the print he displays is not his personal handiwork. Moreover, it might be the better part of wisdom to disclaim authorship of the print or prints at the outset to spare himself the embarrassment of consequent disclosure, as was the case at an extensive exhibition of attractive

soft-focus prints, last spring, where it developed that every print had been made by a well-known local photo-finisher. Indeed, it was doubted that the exhibitor had even developed his own exposures. As the result of this knowledge, the collection of prints created but little interest among photographic connoisseurs. Perhaps the snapshooter in question was entirely satisfied in the knowledge that he personally exposed the camera on the subjects (children at play) and that without that achievement no prints would be possible. But, even so, he forgets that there are other children who amuse themselves in the same way, and that such scenes may be photographed by other camerists possessed of superior artistic ability. The photographic field, with its unlimited possibilities, is vast and manifold, yet small in certain respects. In its monthly competitions, PHOTO-ERA stipulates that all entries shall be the unaided work of participants. In cases of doubt, the Editors exercise their privilege to request a signed declaration, and aided efforts receive no recognition unless the names of both authors are given.

This seemingly arbitrary rule has been productive of much benefit, in that it has obliged would-be competitors to do their own photo-finishing. In many instances, these reluctantly complying snapshooters complained of the hardship the Editors imposed upon them, when they asserted that they were having ample sport in merely making the exposures. When they eventually won Honorable Mentions, however, and even prizes, and had been advanced from the elementary class of snapshooters to the dignified order of amateur photographers, they realised what enforced practical effort had done for them. They were jubilant, and expressed themselves as being completely satisfied. What was seemingly of greater importance, however, was the supreme satisfaction these independent, experienced workers felt when they had reached the stage of technical skill where they could "beat the photo-finisher at his own game." This acquisition of sound, technical knowledge has enabled these practical amateurs to read photographic magazines understandingly and profitably, to join a progressive camera club and to appreciate the true value of photography as a pastime.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition
Wolfeboro, New Hampshire, U.S.A.

Prizes

First Prize: Value \$10.00.
Second Prize: Value \$5.00.
Third Prize: Value \$3.00.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced. Prints on rough or linen-finish surface and sepias are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins; but in every case, prints should be protected by strong, stiff boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Still-Life

Closed April 30, 1922.

First Prize: Mercedes Gillies.
Second Prize: P. McAdam.
Third Prize: Wm. S. Davis.

Honorable Mention: J. E. Carson, Munkazn Date, W. E. Donahue, W. H. Evans, R. C. Gorham, J. Thornton Johnston, Helmut Kroening, Edgar S. Smith, Eleanor S. Smith, Joseph Coburn Smith, R. E. Westmeyer.

Subjects for Competition—1922

"Winter-Sports." Closes January 31.
"Home-Portraits." Closes February 28.
"Child-Studies." Closes March 31.
"Still-Life." Closes April 30.
"Bridges." Closes May 31.
"Marines." Closes June 30.
"Landscapes with Figures." Closes July 31.
"Summer-Sports." Closes August 31.
"Parks." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the first Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Should Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, are inclined to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know?

This is often the reason why careless entrants wonder what has become of their prints. Let them be more careful in the future. We will do our part, gladly.

We are eager to make these competitions of practical value and benefit to every entrant. However, to serve each one to the best of our ability, we must have the necessary information.



STILL-LIFE

MERCEDES GILLIES

FIRST PRIZE—STILL-LIFE

Testing the Exposure of Negatives

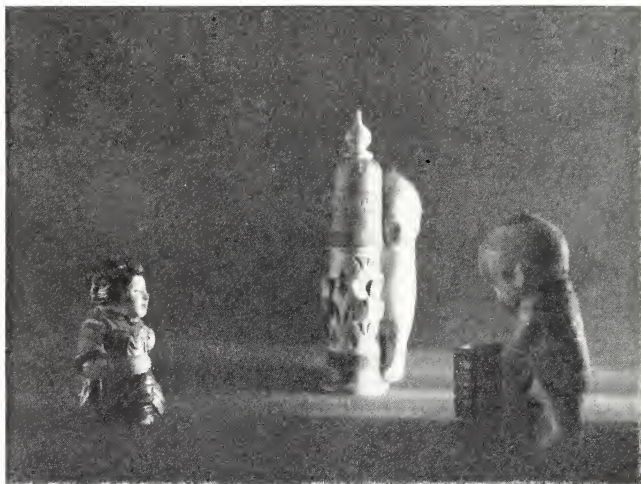
CORRECT exposure is certainly the secret of good photography; but obtaining correct exposure is unfortunately the beginner's greatest difficulty. Everything possible has been done, however, to simplify the exposure-problem, and the photographer who has obeyed all the rules laid down for his guidance would no doubt be thankful for a definite indication as to whether or not his exposures have actually been correct. Now this indication is automatically and accurately given if the two scientific methods of development—by time and factor—are combined.

The ideal method of development, for the beginner at any rate, is time development, which, besides yielding perfect negatives without fail when the exposure has been correct, within reasonable limits, gives negatives of normal contrast even when they have been under- or overexposed. Factorial development, however, tends to produce over-contrast in underexposed negatives, and under-contrast in overexposed negatives, and is, therefore, only suitable when the exposure is known to have been correct. Thus, as it is desired to ascertain whether the exposure has or has not been correct, it becomes necessary to combine the two methods.

Let us suppose, then, that the tables in use give six minutes at the temperature registered as the correct time for which to develop the particular plate or film exposed, and that the Watkins' factor for normal contrast for the developer being used is twelve. The

latter condition means that if the exposure has been correct the negative will be correctly developed in the length of time obtained by multiplying by twelve the number of seconds which elapse between the pouring on of the developer and the appearance of the first sign of the image. If, therefore, we *divide* the time specified in the time-and-temperature tables, viz., six minutes, by twelve, we find the length of time required to produce the first sign of an image on a correctly exposed negative—in this case, thirty seconds. There is an important exception to this rule, however, in negatives which are skylless. In such cases the time required for the first appearance of the image on correctly exposed negatives is found by increasing the time for other negatives by one-half. Thus, in the present instance, the time for a skylless negative would be forty-five seconds instead of thirty seconds. Development will be complete, however, in the normal time; as it is necessary in factorial development, when dealing with skylless negatives, to reduce by one-third the time obtained by multiplying the number of seconds which expire before the image appears by the appropriate factor. If we apply this rule to the example chosen, we see that $45 \text{ secs.} \times \frac{1}{3} = 15 \text{ secs.}$

The necessary calculations having been made, the developer may be poured on and the exact time noted. As soon as the first sign of the image appears, the exact time should again be observed, and if in the present instance it is found that thirty seconds—or forty-five seconds in the case of skylless negative—have elapsed,



"AN ORNAMENTAL AFFAIR"

P. MCADAM

SECOND PRIZE — STILL-LIFE

we may be perfectly sure that the negative was correctly exposed. If the image appears in a shorter time we know that the negative has been overexposed; if a longer time is required, the negative has been underexposed; and the amount of the discrepancy on either side gives a good indication of the degree of error in exposure.

The exposure of the negative having thus been tested, the tray containing the plate or film may be covered during the remaining time of development and rocked occasionally. If the exposure has proved correct, it may be decided to reduce or increase the total time for development according to whether a negative of soft or strong contrast is desired. Here the factorial method may operate, the prescribed factor for soft or strong contrast being used. On the other hand, if the exposure has been shown to be incorrect, time development should be adhered to, as this is much the best plan for exposures which are known to be incorrect.

It has been asserted that the development of plates and films by the time-and-temperature method deprives the process of much of its interest to the photographer, but when the method is combined with factorial development in the way described, new interest is added. Moreover, the lessons to be learnt from this dual method of development are invaluable to the beginner.—L. TURNOCK, in *The Amateur Photographer*.

Some Photo-Helps

ALMOST all small hand-cameras—film or plate—with a direct-vision finder open vertically, although most pictures are made with the camera on its side. This means that the left hand must help hold the camera

when turned over and also manipulate the shutter-release, which often results in jarred 1/10 second exposures, or exposures with high-speed subjects that demand instant releasing of the shutter. Remedy: Use a "Kodapod" as a "hand-tripod", making sure that the setting-screw holds tightly, and propping the lower right side of the camera with the thumb of the right hand. This will hold the camera securely, in the manner of a stereoscope-handle, and leave the left hand free. One may also use the handle of the flash-sheet-holder in the same manner, turning it so that the camera will not tip over. If these "contraptions" fit too loosely, slip a rubber- or leather-washer over the tripod-screw, thus shortening it.

SOME small cameras have either no bellows-rings, or the rings are not advantageously placed. A strong-gripping steel paper-clamp (at stationers') with a wire run through the handle-holes and the other end of the wire hooked around the camera-front will do nicely and will grip the bellows anywhere.

A SMALL spirit-level, such as hardware-stores sell—one that can be "read" at eye-level—placed first on top of camera-body and then on camera-front, is a valuable help when working with an oblique wide-angle lens which "hates to bother with perpendicular lines" often, being rather less rectilinear than other double lenses.

PHOTOGRAPHING after sunset and at dusk with meters that do not test the light (Relio, Burroughs-Wellcome, etc.): *Figures directly after sunset and a few minutes after.* Multiply the *Brightest Light Factor* given by the meter for the particular month and latitude by these factors: Cloudless sky, 21; thin, vapory clouds, 31½; light-colored cloud-blanket with openings, 42; light-

gray, overcast sky, 63; gloomy or threatening sky, 84. Figures are approximate, but seem to work well, giving full exposures—as far as the light permits.

Later than the preceding, up to almost deep dusk—20–30 minutes after sunset, depending on the month and latitude. Take the last light-value—of the month and latitude—your meter gives and multiply with the following factors for every single minute after sunset:

Average landscape (no foreground-detail)....	7½
Buildings, streets, dark landscape, etc.....	15
Portraits, dark buildings, etc.....	30
Near objects, relatively large image.....	60

graduated filter there. It is carried in a little fitting on the outside of the lens-hood, in which it can be slid up or down, to adjust it to give the effect desired; and whatever may be one's opinion as to the legitimacy of its use, there can be no question that it can be employed to give a very marked difference of correction between one end of the picture and the other. A moment's reflection serves to show that this must be so. It is obvious that if we had a large enough color-screen, we could hold it at some distance from the lens, so that all the light from the sky which reached the lens had to travel through the color-screen; while



LIGHT REFRESHMENTS

WILLIAM S. DAVIS

THIRD PRIZE — STILL-LIFE

Distant scenes, snow-scenes, beach and ships.....	3½
Sea and sky only.....	17½

These figures, too, are approximate but seem to work well when used intelligently. They will, of course, not work in dense forests, deep ravines, and so on.

HELMUT KROENING.

Graduated Light-Filters

THERE has been a renewed discussion on the subject of the graduated light-filter, says *The Amateur Photographer*. When this was introduced years ago, it was solemnly pointed out by certain wiseacres that, since every part of the lens played a part in the formation of every part of the image, no graduation of the light-filter could exercise any local effect. This might be true enough if the graduated filter were used at the diaphragm between the lenses, or even in close proximity to the lens; but no one thinks of using the

at the same time the screen did not interpose between the lens and the lower part of the subject. This is only an exaggerated version of what actually takes place when a graduated filter is used in the place intended for it. It is probable that those who have tried these filters and have failed to find any difference between the color-rendering—or rather the exposure—at one end of the negative and at the other, have used the filter too far down, so that it was exercising its full effect, or almost its full effect, over every part of the subject. So far from the graduated character having no influence, it is only too easy for it to have a startlingly unreal effect.

Mrs. Woodby-Younger: "That picture may be art, but it makes me look frightfully old."

Mr. P-smear: "Quite so, dear lady. I paint for posterity, and you will look fully that old by the time my talent is recognised."—*Washington Star*.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



SAFE AT THIRD!

LEONARD C. LEE, JR.

EXAMPLE OF INTERPRETATION

Advanced Competition—Summer-Sports Closes August 31, 1922

WHEN all is said and done, the average amateur photographer does most of his photographic work during the summer-months. In fact, human nature is largely responsible for the popularity of photography in the summer-time. The weather is warm, the light is usually good, there are days available for rest or recreation, and the making of pictures is comparatively easier and more attractive. The experienced worker has no seasons, and has overcome the human trait to shirk possible physical discomfort. To him, the biting cold is no obstacle to "carrying on" photographically. However, where there is one throughout-the-year worker, there are hundreds who confine their picture-making to the summer-months. This should not be so; and we are glad to note that more of our readers are making pictures throughout the year than ever before. Nevertheless, those who have not reached this "advanced" stage in their photographic experiences, should have some consideration. To help these, we offer the present competition—summer-sports.

It should be remembered that the camerist has everything in his favor during the summer-months. The active value of the light is at its best, he may go

about in physical comfort, and his subject-material is not hard to find. Although a reflecting-camera is to be preferred, it should not be assumed that pictures of summer-sports cannot be made successfully with other types of cameras. A few moments spent in reading the instruction-book, or a good book on general photography, or one devoted to the question of exposure, will show that even a box-form camera may be used under favorable conditions. Of course, to photograph a baseball in flight or a speed-boat tearing through the water is too much to expect of a moderate-priced equipment; but then, a game of croquet or other "quiet" sport will be as acceptable to the jury, provided that the picture possesses technical and artistic merit. However, most folding hand-cameras are equipped with shutters that are of sufficient speed to enable the camerist to make pictures of virtually all summer-sports. Even in cases where the great speed of the subject might deter the worker from making the exposure, there is usually a viewpoint from which to obtain a picture that will not show motion.

Vest-pocket cameras are very effective in making pictures of summer-sports. They are small, light, and fitted with lens-and-shutter equipments that will enable the camerist to "stop" all but the very fastest subject. A distinct advantage of the vest-pocket out-

fit is its portability, and, for that very reason, it is more apt to be "taken along" to be used when occasion offers. The heavy, cumbersome tripod-outfit is out of place and more likely to be injured than to make a picture. A camera that may be manipulated quickly, that is reasonably well-equipped with a lens-and-shutter combination and that may be carried easily, is the outfit to use, if possible.

In this competition, as in all competitions, the worker must seize the psychological moment when the subject is at its best, to press the shutter-release. Certain forms of summer-sports are difficult to photograph, and the camerist will be compelled to think and to act quickly. For example, let us suppose that we are watching a motor-boat race. One of the boats is rounding the first buoy in a sparkling flash of leaping spray and foam-flecked wake. Is this the psychological moment? Perhaps it would be better to wait to photograph this same boat as she spurts down the home-stretch, and to victory. To my mind, the burden rests squarely upon the shoulders of the camerist to make the right selection. It depends upon the thought that the worker aims to portray. If he intends merely to record a speeding motor-boat, that is one thing; but if he wishes to combine a picture of the boat with the excitement of a close finish in the race, that is another matter. The same thing might be said with regard to a number of other summer-sports, such as baseball, track-meets, polo, swimming, tennis, yacht-racing, auto-racing and the ever-popular horse-race.

Probably, the most popular sport is baseball; that is, more persons play or witness a baseball-game than any other summer-sport. The example "Safe at Third;" by Leonard C. Lee, Jr., is a picture which any lover of baseball would admire; and it illustrates clearly an incident of the game that is thrilling, and yet not without pictorial appeal. I am sure that a careful re-reading of the article "Baseball-Photography," by Mr. Lee, in the August, 1921, issue will prove to be of interest and much practical value.

However, although the summer-sports pictures will come under the general heading of speed-pictures, the camerist should remember that the jury is not interested in a speed-picture unless it tells a story convincingly about a summer-sport. In short, no matter how fine a speed-picture the camerist might send in, it will not be accepted simply because it is an excellent photograph. It must depict a summer-sport, first; and, then, the factor of speed may become apparent, but of secondary importance only.

In considering the subject of this competition, the worker should not conclude that sport-pictures must be confined to races and games. A moment's reflection will reveal many summer-activities which may be included in this competition. For example: canoeing, hiking, fishing, clam-digging, picking flowers, bird-study, hunting butterflies, camping, tether-ball, croquet, ring-toss, quoits and a number of other pastimes that vacationists might engage in. True, these may not be sports in the commonly accepted sense; but they are eligible under the general heading of summer-activities that invade the element of sport. In short, we wish to make this competition broad enough to reflect, pictorially, in artistic compositions, the life and pleasure of the summer-season.

The camerist must be governed by circumstances and the environment. Obviously, if he lives in the middle west, some action from a large body of water, or among birds, flowers or a wooded park. However, there are summer-sports in his part of the country that will be welcomed by the jury just as heartily as if the matter

lived on the Atlantic seaboard. In this connection, it might be pointed out that there may be sports in remote corners of our large country that some of us never heard of before. Any worker who can send us a picture of this sort and combine with it the requirements of good technique and composition will be making a valuable contribution to this competition.

Let me say just a word with regard to an unfortunate tendency among many vacationists. There is no denying the appeal that new friends and acquaintances make, as we meet them during our vacations at the seashore or in the mountains; but, in most cases, in a few months, the appeal has spent its force and, instead of an interesting pictorial record of our travels, we have but a collection of persons that we soon forget and who mean nothing photographically. Mind you, I am not discouraging the making of pictures of the family and of friends; but I do wish to call attention to the wasted opportunities to make pictures of places that we visit, so that years afterwards we may turn the leaves of the photo-album with pleasure and profit.

Another word of suggestion might be of service, right here. Let the reader determine, once and for all, that he will merit the title of amateur photographer. Above all, let him see to it that he does not become classed with the snapshooters—those who point the camera in the general direction of the subject and trust to luck and the corner drug-store to do the rest. The amateur actor, musician, writer, or lecturer may be as proficient as the professional, and "amateur" in no sense implies inferiority. The amateur photographer may be fully as expert as a professional of international reputation. PHOTO-ERA MAGAZINE has striven for years to dignify the term amateur photographer. The snapshooter should never be called an amateur photographer until he wins his photographic spurs.

Perhaps, one of the most difficult obstacles to overcome in photographing certain summer-sports is the crowd of spectators. Of course, in some cases, the nature of the sport is such that intruding heads and shoulders are not likely to spoil the picture. However, it is well to be on the alert at all times. A number of years ago, a friend crossed the Atlantic and journeyed to Oberammergau to witness the Passion Play. At the time, he possessed an excellent photographic outfit which he knew how to use. However, when it came to the pictures that he made of his trip, he was sadly "out of luck". Virtually every one of his most important pictures was marred by a distorted head or arm, the brim of a hat, a lady's sunshade or even a cigar held directly in front of the lens by an interested spectator in the front row at a football-game. The reader might ask, "Why didn't he look out for these things?" That is just it, why didn't he? Naturally, he was very much disappointed; but that did not help matters after he had returned to the United States. An important factor in the photography of summer-sports is the careful selection of a point of vantage from which an unobstructed view of the game or event may be obtained at all times. Unless this precaution is taken, it is very likely that at the very moment when the excitement reaches its highest pitch the crowd or certain individuals will rise in their seats and cut off the view entirely.

Let us have a large number of entries in this competition. Especially, let us hear from our new readers and subscribers. The subject is a popular one, and the success of this year is well suited to the comfort of the contestants, old and young. Let all remember that the best is none too good in photographs, and that high standards of photography and technique are the only way to keep.

A. D. B.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition
Wolfeboro, New Hampshire, U.S.A.



Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. Or, in case of dual authorship, names of both should be given. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface paper and sepias are not suitable for reproduction, and should be accompanied by smooth prints that have the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* **Criticism at request.**

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for 2-cent stamp.* **Be sure to state on the back of every print for what contest it is intended.**

8. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins, but in every case, prints should be protected by strong, **stiff** boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

Awards—Beginners' Competition

Closed April 30, 1922.

First Prize: M. J. Burellbach.

Second Prize: John J. Griffiths.

Honorable Mention: Franklin Chapman, Martha Curry, Lillian Newton, Philip Mehler.



What is an Amateur Photographer?

PERHAPS the most direct reply to the question is to state that an amateur photographer is not a snaph-shooter. What, then, is a snaphooter? Briefly, a snaphooter is a person with a camera who makes no attempt to master its manipulation beyond the press-the-button stage, and who merely points the camera in the direction of the subject, releases the shutter and depends upon the photo-finisher to do the rest. According to Webster, an amateur is, "one who is attached to or cultivates a particular pursuit, study or science from taste, without pursuing it professionally." However, there is nothing about this definition to suggest that "amateur" implies inferiority. The remark is made sometimes that Mr. A. is "only an amateur photographer", as though Mr. A.'s pictures were not equal to the skilled work of the professional. As a matter of record, the photographs of many amateur workers are not only equal, but superior, to the work of some professionals. Hence, let the beginner consider the word "amateur" in the light of a title or rank eminently worth striving for at every opportunity.

Furthermore, it may be pointed out that the amateur in art, drama, letters and music is in no sense to be considered below the standard by which we judge the professional. True, every amateur is not so good as the average professional, but to say that because a person is an amateur, he or she cannot produce a finished piece of work, is to court prompt refusal. In short, the word "amateur" is a term of dignity and not of depreciation. It is vitally important that the beginner, early in his photographic career, should make every effort to merit the name of *amateur photographer* in the full sense of the term.

Sometimes, I feel that it is to be regretted that modern photography has been so simplified for the average person. Obviously, I rejoice that young and old may enjoy its benefits; but the very simplicity that is merely a stepping-stone to the enthusiastic individual is often the undoing of the less ambitious or easy-going beginner. Unless the novice "watches out", human nature will assert itself and, within a few weeks, he will join the great army of snaphooters who snap away during the summer-months and incidentally "snap away" the opportunity to get the most pleasure and benefit from photography. The annual waste of films and plates is appalling from the point of view of good pictures. To be sure, there are thousands of these record-photographs that appear to please the snaphooter for the time being; but in a few months their interest dies, and he faces the fact that his photo-album does not contain one worthwhile picture of the beautiful things he has been privileged to see during



THE OLD HOMESTEAD

M. J. BURELBACH

FIRST PRIZE — BEGINNERS' COMPETITION

his vacation-days. As for the hundreds of overexposed, underexposed, fogged, light-struck and otherwise worthless plates and films, the less said the better.

Although PHOTO-ERA MAGAZINE has been doing its best to dignify the term "amateur photographer", it has not been doing this merely to gratify an editorial whim or to make it a "talking-point" to sell the magazine. The fact is, the man or woman who makes every photographic step count, will get ever so much more pleasure out of photography. We know this to be true from years of practical experience, and for that very reason we try to impress our reader with the importance of becoming *real* amateur photographers. The successful camerist is the one who gets the most out of photography, and we are eager to help every reader and subscriber make a success of photography. However, it must be remembered that reading about success, or wishing for success, does not make success. It is the practical work that counts. We can suggest and help in every way possible; but we cannot make any reader or subscriber successful by writing editorials. As in every walk of life, personal ambition and energy decide the day.

The snapshooter may be likened to the person who can "drum" a few chords on the piano, but who cannot read music, play a good selection or otherwise give himself or others pleasure. He is neither a musician nor is he entirely without a certain appreciation of music. He simply does not fit anywhere, and consequently, he is a "snapshooter" in the musical world. It would be much better if he did not touch the piano at all. Either that, or let him practice sufficiently to play a simple melody well. The world to-day has little room for the man or woman who is not able to take a definite stand on one side or the other in the problems and experiences of modern life. In photography, the snapshooter arrives nowhere. He does not make good pictures, but he is able to make the exposure and there he stops. He is "neither here nor

there" photographically. In business or in sport, we admire the man or woman who can play a good game, and that is why we encourage our readers and subscribers to "play a good game" and become *AMATEUR PHOTOGRAPHERS*. It is the one way to achieve lasting results and real pleasure.

It has been my privilege to serve many who were eager to make a success of photography and, for that reason, I know whereof I speak when I say that the real amateur photographer gets the most pleasure out of photography. Why shouldn't he? He knows how to use his equipment; he knows how to adapt plates or films to his requirements; he knows how to compose a picture; he knows where to go and how to select subjects; he knows how to do his own photo-finishing, and he knows how to select the best pictures from his collections to exhibit. He "plays a good game" and enjoys the satisfaction there is in doing anything well. To be sure, he fails, now and then; but he knows how to overcome his difficulties and is eager to prove to himself that he can overcome them. No wonder, then, that he makes a success of photography and, as a result of his proficiency, he may enjoy a degree of self-satisfaction.

Therefore, the amateur photographer is really a skilled camerist who can do professional work artistically and technically. He may have been a snapshooter at one time and may have realized that he was getting nowhere photographically. In any event, he decided to advance, and to-day his photographic work is a source of pleasure to himself and to his friends. There is a right way and a wrong way to do everything. In photography the right way is by making good—first—as an amateur photographer and—subsequently—as the laurels of a pictorialist may be won; and, perhaps, eventually may come the full title of professional pictorialist and portraitist. However, to the right—be a good amateur photographer.

A. H. B.

To What Size is Enlarging Possible?

EXPERIENCE has shown that there is no limit within reason to the size to which a photograph can be enlarged. A fine photograph exhibited a few years ago was six feet long, and wide in proportion. It seemed to be as full in detail as any one could wish, yet, it was an enlargement from half a $3\frac{1}{4} \times 4\frac{1}{4}$ negative. A series of pictures 10×12 inches, enlarged from negatives one inch square, were so full of detail that the threads of the cloth which one of the subordinate figures was wearing could be seen. In this case, however, the

but the camera was not motionless during the exposure. The first thing to do, then, is to learn how to "press the button" without shaking the camera.

Another reason why many negatives will not give good enlargements is that they are underexposed, or overdeveloped, or both. Underexposure gives as mere blanks areas which should possess detail; and these blanks, which might pass unnoticed in the tiny contact print, are very evident in the enlargement.

It is also generally recognised now that underexposure gives an image of a coarser grain, which enlarging shows up. Overdevelopment makes a negative harsh



A STORM IS NIGH

JOHN JAMES GRIFFITHS

SECOND PRIZE—BEGINNERS' COMPETITION

camera had been most carefully constructed to give a sharp image, and the negatives were made many years ago by means of the wet-collodion process, which was one that gave an image of far finer grain than the dry-plate now in use. Still, with the best of the modern dry-plates, if they have received sufficient exposure, the grain of the image is so fine that it may be regarded as presenting no difficulty at all, as far as enlarging the whole of the negative is concerned.

There is no need, therefore, in choosing the size of camera to buy, to allow the size of the enlargements which are to be made to influence the selection. This is well recognised by many experts, who use outfits of "vest-pocket" size, and enlarge their negatives to 12×15 or even bigger for exhibition. It is sometimes possible to recognise that these enlargements have been made from very small negatives; but it needs an expert to do so, and he will not be led to that conclusion by any imperfection or shortcoming in the enlargement.

The novice must remember, though, that a negative to bear a very high degree of enlargement must be a very good one. This does not mean that it must be taken with a very expensive camera, but by a very competent photographer. A very great many hand-camera negatives will not give good enlargements because they are not as sharp as the lens will give. It may be that they were not properly focused; but in by far the greater number of cases it is not the focusing which is at fault,

in its contrasts, and enlarging increases this harshness; so that a negative which is not excessively harsh when used for contact-printing fails when it is put in the enlarger.

Finally, it must be recognised that enlarging enlarges defects. It is therefore of the greatest importance to make the small negatives as perfect as possible. Scratches, spots, stains, and pinholes become very prominent and, indeed, ruinous when they are enlarged to the extent which is none too much for any good negative.—R. U. N., in *The Amateur Photographer*.

"Medicine" to Make Pictures

We are indebted to Mr. G. M. Milner, manufacturer of the Milner Light Gauge, for the following true incident. It seems that he happened to be standing at the counter in Marsh & Company's photo-supply store, San Francisco, when a "long-waisted Jap, standing about four feet four" came in to purchase a developing-outfit. Of course, this included trays, stirring-rod, lamp, printing-frame, thermometer and paper. When it came to the necessary chemicals with which to do the developing and fixing, the Jap appeared to be at a loss to explain to the salesman just what he wanted. At length, in apparent desperation, he asked for "medicine for make pictures."



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

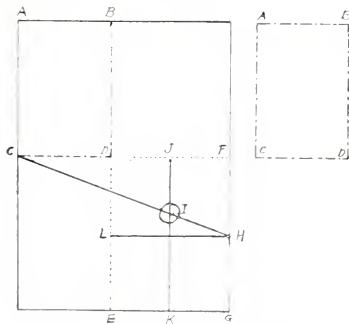
Edited by A. H. BEARDSLEY



Mounting Photographs Mechanically

PHOTOGRAPHERS, students and others are often puzzled in mounting a rectangle upon another (photo upon a mount) as to just where it will look the best. True there is one spot that is absolutely correct. One without a trained eye for proper proportions has, as I state above, considerable trouble in locating such a position.

Dynamic Proportion applied to the proper relation of one rectangle to another when placed thereon answers this problem mechanically.



Example: Place rectangle a, b, c, d either vertically or horizontally in upper left-hand corner of larger rectangle. Continue the line b-d to e and the line c-d to f. Then divide d, f, e, g into four equal parts, j-k, l-h. Draw a line from point c to point h and at the point i where c-h crosses line j-k is the proper location for the lower right-hand corner of the smaller rectangle or point d. ALAN G. CLARK.

The Cobalt-Iron Process

THE extremely high cost in Germany of all chemicals based on the precious metals, since the mark has lost its value, has led both amateur and professional photographers to look for cheaper substitutes for use on photographic paper than those heretofore employed. They started with an attempt to utilise the old blue-print process, which is an ideal one both for simplicity and cheapness, but no one likes the color. At first, efforts were made to change the color by toning, but without success. Later they turned their attention to the salts of cobalt and iron. Herr Johann Burian, a German engineer, has worked out a method based on salts of these metals, which he claims to be easily workable and to give satisfactory results. As a matter of information we give a brief outline of the process as described by Herr Burian in *Die Kunst*.

The sensitising-solution consists of two parts of the cobalt-solution and one part of the iron-solution, and being extremely sensitive to the light must be kept in dark-brown bottles in a dark closet. The cobalt-solution is composed principally of a 30 per cent solution of ammonium-cobalt-oxalate in distilled water. The iron-solution is made by dissolving ferri-ammonium-oxalate in distilled water, 1 part to 2. The paper is prepared in a doubly-lightened room, the sensitising-liquid being applied with a broad, flat brush as in the gum and platinum-processes. Artificial heat must be avoided in drying the paper, owing to risk of precipitating the cobalt-salt. The paper will keep about 20 hours. Printing can be done by electric or other artificial light and should be timed or a photo-meter used.

Development is done in the same way as with ordinary developing-papers, using potassium ferricyanide, and is complete in from one to two minutes. After developing, the print is well rinsed and placed in a bath of muriatic acid 1 to 100 for a few minutes; the acid is then poured off and the print again rinsed and placed in another tray that contains a 1 to 400 solution of sodium sulphite, which is rocked till a deep brown tone is reached. The print is then washed thoroughly and hung up to dry. The developer, if protected by a dark-brown bottle, and the acid-bath can be used repeatedly. The whole operation takes but a few minutes; and, provided the exposure is correct, gives a very satisfactory and comparatively durable scopia-print.

The Permanence of Sulphide-Toned Prints

A PROFESSIONAL printer and enlarger once told us that he had never once come across a case of fading or alteration in a bromide or gaslight print or enlargement which had been toned by bleaching followed by sulphiding, says the *Amateur Photographer*. Silver sulphide, into which this process converts the image, is at least as permanent a substance as silver itself; more so, in fact. But the process brings with it another advantage. Everyone knows that the greatest enemies to permanence in the case of silver-prints of any kind are insufficient fixing and insufficient washing. The careful worker knows how far to carry each of these processes, in order that he may be quite sure that they are complete; but unless we know the treatment the print has received, we cannot be sure that both operations have been done with due thoroughness. But the fact that a print has been successfully toned by the sulphide method is in itself a guaranty that it has been properly fixed and properly washed. If we attempt to sulphide-tone a print which is not completely fixed, brown stains are inevitable and the print is ruined. In the same way, if the print has not had all the washing it should have had, application of the bleacher will reduce it, more or less, and the final result will be poor and weak. This is one of the common causes of poor colors. Sulphide-toning, then, in addition to its value in giving a warm color, serves as an infallible indicator that both fixing and washing have been properly done, and, in fact, is an assurance that the print will last undimmed quite indefinitely.



OUR CONTRIBUTING CRITICS



MOULT MOUNTAIN

C. H. TRUE

YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the last day of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

TECHNICALLY speaking, I should say this was well done. The tones are well rendered and there are no staring contrasts; neither over- nor underexposed. The composition, however, is trying. There are three distinct centers of interest, each vying with the other to attract the beholder's attention: the man, the bull and the group to the left of the picture. The picture would, perhaps, be improved by trimming out the group at the left, leaving only the man and the bull in the picture. Unfortunately, the two resulting figures would not then be pictorially connected, unless we say that the man is suspicious of the next move of the bull, as a bull-fighter might be in an arena. But there is nothing to suggest that attitude in the surroundings as seen in the picture. Moreover, one has an uneasy feeling that the bull is looking directly at us, possibly getting ready to lower his horns and charge at us. A much more convincing attitude would have been to wait till the bull was drinking at the bucket in front of him, while the man might be standing naturally by, waiting for the operation to be finished. Another

great improvement would have been the softening or elimination of the many lines running in different directions in the background.

E. L. C. MORSE.



THE principal objection to the picture of C. Stutzman is the halation at top of print, and the object of interest placed too near center of picture. All this could be corrected by trimming. Remove about one and one-half inches from top of print; one-half inch from right side of print along the lower edge and the white line (fence-rail) back of tree and along the side of shed obliterated, and "The Watering Place" would be a pleasing pastoral scene—well balanced and well handled.

Mrs. S. S. DUGAT.



At a glance, it is immediately apparent that the main technical fault of this print is underexposure. The absence of detail in what few shadows there are, and the paleness of the grass and foliage on the trees are both due to this fault. The halation around the



THE PICTURE CRITICISED THIS MONTH

upper parts of the trees I think is also due to a great extent, to underexposure, for with the absence of the sunlight, a fact which is shown because the trees do not cast any shadows, it is doubtful that such strong halation could have resulted if a longer exposure had been given.

The composition is faulty because the man, the bucket, the animal and the picturesque fence are all competing for interest at once, and whereas each object may be interesting in itself, it is, of course, very tiresome to try to look at them all at the same time. The title suggests that the main interest is in the bucket or well with the bull near it, and, therefore, as the man is no part of the theme, he could easily be eliminated without spoiling the picture by trimming one and three-sixteenths inches from the right-hand side. The halation and unnecessary piece of road at the bottom of the print could also be eliminated by similarly trimming about one and one-eighth inches from the top and about one-half inch from the bottom. I think then, if the remaining part would be enlarged a few times, and intensified, the picture could be improved very much.

WADSWICK B. MILLER.



MR. STUTZMAN's picture seems to prove that the old adage, "You can lead a horse to water, but you can't make him drink", applies also to the human species, as one would suppose that with the title, "The Watering-Place", that the animal should be drinking. However, aside from that oversight there are several things in the picture to attract the eye, and keep the attention away from the main theme. It seems to me that a better composition is secured if you trim one and one-eighth inches from the left side

of the print, about five-eighths inch from the top, and about one-half inch from the right side. The last two cuts take out some of the halation in the trees and also keep the eye from wandering out to the right into the dark mass of shrubs and rocks. It might be that a different viewpoint for the scene, let us say several feet to the left of where the camera stood, would improve the setting by eliminating the partial view of the house in the background, which draws the eye away from the subject. However, I fear that Mr. Stutzman was in the proper place in one respect, when he kept the man who led the bull between him and the animal as nearly as possible. I am free to confess that I probably should have done the same thing.

A. L. OVERTON.



This is an exceedingly interesting record, approaching the pictorial. As far as I am concerned, the print is out of my class for "hammering". Exposure and manipulations seem to be about perfect. There is some halation around the leaf-tips, and a blank space in upper right corner. A viewpoint a little to the left would have resulted in better balancing, would have separated tree and well-frame. A larger diaphragm would have relieved the needle sharpness, and still have shown off the high-grade bullock to advantage, concentrating the focus upon him and made the print a real picture. Animals are very human, witness the "sitter" staring at the camera. I suspect that he was asked to do so, to show off his fine head. A filter could have been used here to advantage, with an ortho plate or film.

J. F. CANNON.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE work of Frederick B. Hodges, both pictorial and literary, has been so frequently the subject of well-merited praise, in the pages of PHOTO-ERA, that it is now so well-known as to need no repetition. Yet, "The River" is but another phase of the artist's profound and sincere admiration of nature, and a repeated attempt to gain the sympathy of the photo-pictorial worker, so that he may get a deeper and more intimate understanding of the manifold beauty of nature—whether manifested in the forest, the road or the river. I am sure that his exhortations, as expressed by words and pictures, will find ready, abundant, and delighted response from his many sympathetic admirers.

Data: Front-cover and page 7—"The River of Evening"; September; 5 P.M.; hazy; 5 x 7 Century camera; 8½-inch Plaginat; used at full opening; 1/25 second; Stanley plate; hydro; clouds printed in. Frontispiece—"The Palisades of the Mohawk River, N.Y."; July; 2 P.M.; fine light; instantaneous exp.; 8 x 10 Century camera; Non-Hal. Orthomom plate; hydro; 11-inch Tessar; at F/8; instantaneous exp.; print, Azo Grade B; sky printed in. This, one of the most beautiful spots in a beautiful valley, is now a thing of the past, a great dam having been constructed at this very point which wiped out of existence a village and large farming-district, creating a lake four miles long and two wide; the palisades were more than one hundred feet high and extended for some distance along the Mohawk here. The Mohawk tribe of Indians inhabited the Mohawk Valley until the middle of the XVIIIth century when its members migrated, permanently, into Canada. Page 4—"The River of the Meadows"; June; 2:30 P.M.; good light; 8 x 10 Century; 11-inch Tessar; at F/11; ½ second; Seed Non-Hal.; pyro; print, Azo Grade B; sky printed in. Page 5—"Self-Portrait"; September; 3 P.M.; fair light; 8 x 10 Century; 11-inch Tessar; at F/6.3; 1/25 second; shutter released by Mrs. Hodges; Eastman Portrait Film; hydro; print, Azo Grade B; clouds printed in. Mr. Hodges posed against the same famous sand-pine which figures so prominently in Mr. Hodges' article, "The Book of Nature"; June, 1921, page 277. Page 8—"The River of the Willows"; June; 4 P.M.; sunlight; same camera and lens as preceding; at full opening; 1/75 second; Stanley plate; hydro; print, Azo Grade B; sky printed in, also reflections of sky in water; this is truly a river of willows, for there are willows all along this stream.

Readers will doubtless recall, for interest and comparison with W. X. Kincheloe's article and pictures, pages 10 to 18, those by Thomas S. Carpenter, in the December number, 1921, although Mr. Kincheloe has given particular attention to details in the use of the photographic equipment.

Appropos of the grasshopper pictured by Dr. Wendell, on page 20, new readers or subscribers should be informed that this accomplished photographer—despite which circumstance he is a skilful and successful dentist, as well—has provided much delectable entertainment by his cleverly illustrated articles on the photography of insects (grasshoppers, frogs, tree-toads, butterflies, and the like). See "Insects in Comic Photography", June, 1919; "Nature-Studies with a Camera",

September, 1919; "Comic Insect-Photography", September, 1916; "With a Camera in Insect-Land", April, 1916. One of Dr. Wendell's most valued articles, on another topic, is "In Quest of the Pictorial", beautifully illustrated, March, 1918, and, as far back as 1913, this industrious and capable worker has contributed illustrated articles on various subjects of great technical value. The interested reader should examine the semi-annual indexes of subjects which will be found in the June and December issues of each year. In doing this, he will discover articles, by standard writers and experienced workers, on an almost endless variety of subjects of timely interest and practical value.

Another entertaining and instructive contributor to our pages is William Ludlum. As a pictorial worker, he probably has never appeared to such excellent advantage as in his latest contribution, "Kodak as you—stay!" pages 23 to 28. How convincingly he demonstrates the aptness of his personally coined slogan, "Kodak as you—stay!"; and how few people appreciate the existing things of beauty in their own, immediate neighborhood! Of course, where ugliness reigns supreme—as it does in so many of our large cities with their innumerable, long, treeless, cheerless avenues of boarding-houses—there can be no thought of artistic effects. One must look in the outskirts, where nature has not been entirely spoiled. Fortunately, Mr. Ludlum lives in a small town where there is less restraint, where property-owners are permitted to express their individuality in managing a garden and the appearance of their own homes, and where vandalism is virtually unknown. Pretty, artistic nooks such as Mr. Ludlum has pictured here, could not possibly flourish in a city like Chicago or Boston, unless protected by high walls or other means. That many of our readers will profit by Mr. Ludlum's observant eye and artistic sense of utility, is not to be doubted.

Data: Page 23—"THE RAILROAD STATION"; 3A Kodak (3¼ x 5½); 6¼-inch R.R. lens; stop, U. S. 8; June, 8 P.M. (D. S. time); bright sun; 1/25 second; Eastman's N. C. Film; Eastman's Special Dev.; Cyko print. Page 24—"A BIT OF ROSE-LAND"; 5 x 7 Premo; 6¼-inch Wollensak Velostigmat; stop, U. S. 8; June, 10 A.M.; bright sun; 1/5 second; Kodak Portrait Film; pyro; Cyko print. Page 25—"THE WHITE BUSH"; month, camera, lens, exposure, film, dev. and print same as first picture; but stop, U. S. 4; 10 A.M.; hazy light. Page 25—"ROSE-HILL WALK"; month, camera, lens, film, dev. and print same as first; but 10 A.M.; bright sun; 1/25 second. Page 26—"THE PERGOIA"; month, camera, lens, film, dev. and exposure same as first; but 1 P.M.; bright sun; stop, U. S. 8. Page 26—"OLD COLONIAL HOUSE"; month, camera, lens, exposure, film, dev., print same as first; but stop, U. S. 4; 7:30 A.M.

It has been generally admitted that professional painters have at last conceded that the efforts of photo-pictorial workers towards individual and convincing art-expression should be recognised as a distinct service to art, if indeed, pictorial photography in the hands of master-workers should not itself be regarded as a sister-art or distinctly one of the fine arts. In any event, it is true that painting has influenced pictorial

photography while itself benefiting materially by the well-grounded and beautifully expressed knowledge of art-principles of gifted pictorial workers. The result of an interesting argument between a camerist and a painter is related by the former in the form of a short, illustrated story. Page 27. The picture is not offered by the photographer as a complete proof of his own artistic ability. It appears to be rather an example of the adoption of superior artistic advice, which, if extended, should result in strikingly picturesque and well-ordered landscape-compositions.

Data: August; 10 A.M.; hazy light; $3\frac{1}{4} \times 4\frac{3}{4}$ Graflex; no color-screen; Zeiss Tessar; at F 32; 1 second; Seed 27; pyro. tank dev.; enlarged on Wellington Bromide.

"In All His Glory", by Leslie R. Jones, official photographer of the *Boston Herald*, page 32. This is the first time, in my recollection, that a peacock, displaying, has been pictured in the pages of PHOTO-ERA. The only exceptions are the advertisements of Burroughs Wellcome and Company, when they feature their "Blue and Green Toners", and then the proud bird is represented standing on a pedestal with his "train" in graceful repose. His magnificent wealth of plumes does not represent the tail, as is popularly supposed, but is made up of the feathers of the lower part of the back and the upper tail-coverts. These gradually increase in length from before and backwards, culminating in the long and exquisite feathers which form the circumference of the huge, outspread shield. This shield is properly called the "train"; the true tail lies behind it and acts as a support. When the bird is about to display, the "train" feathers are slowly and gently raised till the well-known fan-shaped glory of green and gold and blue is exposed to the fullest possible extent.

Watch the bird trying to do his best to persuade his chosen mate what a handsome fellow he is. He first places himself more or less in front of her, but at a little distance away; then, watching his opportunity, walks rapidly backwards, going faster, faster and faster, till, arrived within a foot, he suddenly, like a flash, turns around and displays to the full his truly gorgeous vestments. This turning movement is accompanied by a violent shaking of the train, the quills of which rattle like the pattering of rain upon leaves. Often this movement is followed by a low scream. When the train is fully erect, it will be noticed that it lies so far forward that the bird's head and neck appear as if rising from its base. In a side view the whole body, from the front of the wings backwards, appears to lie behind the train. The peacock is a native of India, where it is held in great reverence by the Hindus, and in the Hindu States it is not allowed to be killed in any circumstances. The peacock, together with the peahen, is found throughout the old world and the new. His propensity to display is confined to the spring and summer. Mr. Jones's subject, facetiously referred to as the "male vamp", is a feature of the "Zoo" in Franklin Park, Boston.

Data: April, 1922; 11 A.M.; dull light; 4×5 Graflex; $6\frac{1}{2}$ -inch Tessar; at F 4.5; 1/90 second; dryplate; M. Q.; Azo print.

Advanced Workers' Competition

THE interpretation of the subject, "Still-Life", has not lacked thematic variety. Among the offerings were landscapes, which, if without human or animal life, the Germans designate, "Still-leben", which is doubtless correct, but generally not so interpreted by artists in England or America. Nor could the jury recognise several well-executed cemetery-scenes—grave-

stones in a setting of perpetual quietude. One little lady—probably not familiar with Mr. Beardsley's advance editorial on the subject—sent an original arrangement of old-fashioned ornaments worn by her great-grandmother, together with these lines:

"I've turned these pages o'er and o'er.

To see what others have done before.

Of the many pictures in this test,

Not one like mine 'mong all the rest".

Hers certainly was unlike any she had seen in looking over bound volumes of PHOTO-ERA MAGAZINE back as far as 1910. This incident should stimulate other future contestants to see what subjects for interpretation have been used in the past, and to try to avoid hackneyed ones. In this way, we shall hope to encourage the element of originality, which has been lacking of late.

The reason that the tea-pot has replaced the beer-mug in still-life compositions is probably due to change of habits—or shall I say to personal preference? Mercedes Gillies, in her attractive combination, page 35, has used a palm-leaf-fan as a background for her tea-pot, somewhat unconventionally, and with pleasing effect.

Data: December; 1921; sunny outside; 100 watt nitrogen lamp to highlight pictures; 4×5 Soho Reflex Camera; 10-inch Kalosar lens; at F/8; Eastman Film-Pack; pyro; 20 seconds; contact-print, P. M. C. Glossy No. 4.

Japanese toys and ornaments, when grouped together, are a favorite camera theme with amateur workers. Used in this way, they have rendered a conspicuous service to pictorial photography. Mr. McAdam has used three of these quaint figures very effectively and artistically in chiaroscuro, page 36.

Data: "An Ornamental Affair"; August; 5 P.M.; good light; made indoors; $6\frac{1}{2}$ -inch R.R. lens; stop, F 8; 32; ray-filter; 10 minutes; Premo Film Pack 4×5 ; enl. on Wellington Cream Crayon.

In "Light Refreshments", Mr. Davis has employed cut-glass receptacles—ordinarily difficult to manage in photography—with his usual artistic skill and judgment. Page 37.

Data: April; 11 A.M.; cloudy, but bright outside; 4×5 view-camera; old R. R. lens; 10 inches focus; at F 11; 30 seconds; Stanley Commercial Ortho; Edinohydro; print, Eastman Portrait Bromide, Grade D, enlargement.

Beginners' Competition

IN the "Old Homestead", page 41, M. J. Burelbach has shown much artistic feeling and delicacy of treatment. This worker is enthusiastic and studious and, with a better understanding of the principles of composition, will surely make noticeable progress.

Data: March; 3 P.M.; good light; Ansco Speedex $2\frac{1}{4} \times 3\frac{1}{4}$; $3\frac{1}{2}$ -inch Wollensak Vycostigmat, F 4.5; stop, F 8; 1/25 second; Eastman Roll-Film; pyro. tank-dev.; enl. on Artura Carbon Black, Grade D.

J. J. Griffith has an eye for what is promising picture-material, and surely would have produced a more forceful print with expert knowledge of chemical manipulations. Of course, that knowledge comes to the beginner after intelligent practice; but the material must always be fresh and of the best. Also, the practical application of the fundamental principles of good composition is what helps the camerist to achieve success.

Data: April; 10 A.M.; diffused light, through clouds; No. 2 Kodak $2\frac{1}{4} \times 3\frac{1}{4}$; 6-inch B. & L. lens; stop, F 8; 1/50 second; Eastman Speedy Roll, M. Q.; enl. on Standard B. Bromide.

Example of Interpretation

PARTICIPANTS in our "Summer-Sports" competition will doubtless familiarise themselves with a similar contest, in 1921, and profit by what other workers have accomplished. In any event, this extra effort will yield suggestions, even as to the choice of conditions and materials. Who knows? The example, on page 38, will interest high-speed photographers, although they should remember that there is always the danger of personal safety. The umpire is there to judge the plays, not to direct the flight of the ball, or to warn nearby spectators or photographers of possible dangers. For data the reader is referred to Mr. Lee's well-written and fully-illustrated article, "Baseball Photography", August issue, 1921.

Our Contributing Critics

LET us all join and—criticise the pictorial effort by C. H. True, "Mount Mountain from Echo Lake", near North Conway, N.H., page 44. Data: June 18, 1921; 9 A.M.; Graflex; $7\frac{1}{2}$ -inch B. & L. Zeiss Tessar lc, F/4.5; stop, F/22; 1/20 second; Eastman Film; pyro, tank-dev.; print, Contrast Velox; M. Q.

Eye-Glass Lenses that Make Trouble for the Photographer

SOONER or later, someone is going to come into your studio to have some portraits made, and when your printer makes the proofs the subject is going to have a couple of black eyes, says a writer in *Studio-Light*. This is stating the effect before the cause, but if it serves to get your attention we are quite sure that you will be interested in the cause so that you will be able to avoid the trouble.

The black eyes will be caused by your sitter wearing a pair of eye-glasses or spectacles the lenses of which have been made from Crookes glass. The lenses may seem to be perfectly transparent or they may only have a slight smoky color. They will not be amber colored—in fact will not have sufficient color to make you take notice of them, but they will very likely produce the result we have mentioned above.

Sir William Crookes who invented the Crookes Tube invented this glass primarily for the use of laboratory workers who might, of necessity, be exposed to the very disturbing effects of ultra-violet rays which are an invisible constituent of light. The Crookes lenses absorb ultra-violet, and, as the ultra-violet in sunlight produces a certain amount of eye-strain or fatigue, Crookes lenses are being recommended by opticians to people who spend a great part of their time out in the open in bright light, on the water, motoring, etc.

As a photographic film or plate is especially sensitive to ultra-violet rays you can readily see that if a sitter is wearing these glasses the light reflected into the camera from all of the face, except that part directly back of the eye-glasses, will contain the ultra-violet, and the light reflected from the eyes through the eye-glasses will be minus the ultra-violet. So the eyes will seem to be underexposed.

The effect will be very much the same as if the sitter were wearing tinted glasses. Crookes lenses are made in two grades, A and B, the A glass having practically no color at all and the B glass just the slight smoky appearance we have mentioned. If you encounter a subject wearing the A lenses you may not notice the effect in your negative, especially if you

use artificial light for negative-making. But if your sitter wears the B lenses, look out for trouble. The most simple remedy is another pair of lenses which the sitter usually owns.

It is interesting to know that these Crookes lenses also absorb infra-red rays which are found at the opposite end of the spectrum from the ultra-violet and which are also invisible. These rays are given off largely by hot metals or glass and often cause defective sight, especially among glass-blowers, in the form of cataracts on the eyes. The Crookes lenses offer the necessary preventive measure to safeguard the workers' eyes. So that they are another of the results of scientific research that are proving a great blessing to humanity. The Crookes glass absorbs the ultra-violet and infra-red rays because of metallic oxides and nitrates that are used in making the glass. One of the most common of these is nickel oxide; there being several different formulæ, all producing very much the same effects. As we said at the beginning, however, the thing that will interest the photographer most is the way these eye-glass lenses will act as filters when a subject is being photographed. Keep this in mind and ask your sitter if he is wearing Crookes lenses if you are at all in doubt.

Accuracy of Early Events

A PROFESSIONAL worker of high local reputation gave a lecture on photography, before a large and appreciative audience in a Western city, recently. He deserves credit for enterprise and fitness. It certainly was good advertising, even if in picturing some of the early events of the art, his element of atmosphere slightly obscured charity. Perhaps, no one in his audience noticed his several departures from historical accuracy; but should his success as a lecturer tempt him to repeat his paper—especially before a gathering of professional craftsmen—he may find it desirable to check up his facts with the aid of a standard photographic encyclopædia, although not one photographer in a thousand would be in a position to challenge the accuracy of his historical statements as made in the first place.

For instance, it was Dr. or Professor (not plain Mr.) Draper, of immortal fame, who used his sister (Dorothy Draper)—not his wife—as a sitter, when in 1840—not in 1839—he made the first photograph (a daguerreotype) of any living person. Moreover, his model, on this eventful occasion, was obliged to sit with white powdered face in full sunlight, not forty-five, but only thirty minutes, and that was long enough. Prof. Draper, like other daguerreotypists, used highly polished silver-coated copper plates, not merely polished copper plates, in making his daguerreotypes. These are probably the only mistakes made by our professional friend—we judge only from a brief, printed report of his lecture—but as his enterprise is highly commendable, and worthy of emulation, we hope that he will free his paper of these and, possibly, other errors, so that he may fully merit the approbation of a critical audience, and wide-awake press-reporters, in the future.

Couldn't Fool Him

MRS. NEWITT—"Are you sure that picture's a genuine Rembrandt?"

HER HUSBAND—"Absolutely! I hunted up the man that painted it and got his personal guarantee."

New York Globe.



ON THE GROUNDGLASS

WILFRED A. FRENCH



The Camera as a Money-Maker

No longer does the indigent camerist write to the photographic press eagerly inquiring, "How can I make my camera pay?" Instead, he passes a restless night, occasionally tossing from one side to the other and murmuring to himself: "I need money for films. How can I get it?" He already has a camera, so that he does not need to avail himself of the conspicuously displayed suggestion, at his dealer's: "Take a Kodak with you!" If only the sign read: "Take a roll-film with you!" But it doesn't.

If he will but use his eyes—not in quest of picture-material, but commercial opportunities—he will soon discover how to use his camera advantageously. He should remember the old maxim: "The Lord helps him who helps himself."

I noticed a suggestive but not necessarily exemplary communication in Philip Hale's column, in the *Boston Herald*, recently. Here it is:—"Conspicuously displayed in the window of a restaurant on one of Brooklyn's principal streets is a large reproduction of a photograph of a monster python in whose coils is a poor little fawn which the python is about to swallow. My mouth waters whenever I pass this gastronomic exhibit, and I find it difficult to resist the impulse to enter and order 'Veal-cutlet breaded with tomato-sauce.'"
E. P. HOWARD.

Now the despondent camerist need not confine himself to original, striking subjects designed for restaurants; there are other kinds of business that have not yet been exploited in this manner.

A lobster-dinner could be advertised by a huge crustacean fondly clasping the naked ankle of a boy howling with delight. If the camerist have a fertile imagination, he can concoct a camera-theme for a fish-dinner, another for some outdoor sport—baseball, tennis or canoeing, and get in touch with an enterprising sport-goods store. By and by, if he be resourceful and business-like, he will be making money "hand over fist", and wonder why he didn't think of it before.

If this suggestion appeals to him and he finds it practical and promising he should arrange matters quietly with a number of proprietors *in advance*, so that, by seeing his first venture, other ambitious camerists may not steal his thunder.

X-Ray Eyes

Did you ever hear of a person being endowed with "X-ray eyes"—the power to look through an opaque screen and to distinguish an object that is behind it?

While I was sitting in the barber's chair, recently, having my hair trimmed, I wanted to consult a memorandum that was in my coat-pocket; but remembering that the barber had removed my spectacles to facilitate his work and, being unable to read without them, I gave it up. But that memorandum, indicating several important errands, was uppermost in my mind, and, not wishing to interrupt the barber, I became resourceful. Knowing that my vision was impaired by astigmatism, I quietly removed from my inside coat-pocket a large-sized playing-card—the Jack of Spades. No questions,

please! With a common pin, which I had about me, I slyly pricked a hole through the eye of the Jack of Spades, and then got possession of my memorandum. Holding the puncture in the playing-card close to my right eye—the left one being closed, meanwhile—and the memorandum about six inches in front of it, I easily read what I had written. Naturally the barber had become interested in this procedure, and began to ask questions. I explained coolly that I had "X-ray eyes" and that, by looking through an opaque card with either eye, the other being closed or covered, I could distinguish any small object in front of it. The barber, greatly astonished, held first a ring, then a pocket-knife, then a key—all of which objects I identified correctly. Showing the card, but concealing the pinhole, I convinced the barber that it was opaque. He really believed that I had a strange power of optical penetration—or "X-ray eyes."

The next time I have occasion to sit in this barber's chair, I shall provide myself with two cards exactly alike, offering one for general examination, while securely holding the punctured one. Naturally, I run the risk of being detected, and having my trick discovered, by someone who understands optics or photography.

Issy a Menacher

ISSY KEPLAN, formerly demon "menacher" (manager) of box-cameras, called to inform us that he has given up the "photografting" and is now "demon-menacher of box fighters." His official announcement states:

"I am now a box-fighting menacher with brains; instead of developing pitchers, I am developing box-fighters. My boy Checky Bernstein will give it a fight to Johnny Darcy at the Pioneers athletic club tonight and I want you to be a fair chudge of this battles and gif my boy the decision as I will be in his corner ready to bring him a couple if he is knocked for a goal."

NOTE.—The only part of the above we have any doubt about is the clause "with brains". And we haven't any doubt about that, when we come to think of it.—*New York Sun*.

A Justifiable Error

A READER recently called my attention to an interesting photographic event in London that he had read in a well-known Western newspaper, and which had been quoted from "J. B." Fortunately I recognised not only the article, but the source. The latter was *B. J. British Journal*, only the two letters had been accidentally reversed; at least, I thought so. Nevertheless, the reader always of an inquisitive mind wrote to the editor of the newspaper in question and asked if he knew the meaning of the two letters attached to the quoted article. The answer came back, "John Bull, of course!"

THE best Prohibition agents would be professional photographers, as they are used to taking "stills." Exchange.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



A Public-Spirited Work

THE Toronto Camera Club announces that it is to devote the energies of its entire membership to the making and collecting of a set of beautiful lantern-slides to illustrate, pictorially, the city of Toronto. This collection is to be used in the interests of the city at large and to be loaned to organisations devoted to the study of civic improvement. On July 16, the club will hold an exhibition of contact prints that result from the work of the committees who are expected to cover the following subjects: parks, street-scenes, Humber district, public buildings, monuments, residences, island, sports, exhibition, flower-studies, and the Don and Scarborough districts. We believe that the Toronto Camera Club deserves to be commended highly; and we hope that this excellent example will be followed by similar enterprise in our own camera clubs.

Frederick & Nelson's Third Exhibition

THE third annual exhibition of pictorial photography will be held this year from November 6 to 18, inclusive. In the absence of a regularly organised camera club in Seattle, Frederick & Nelson have acted as pioneers in bringing to that city the representative work of many of the best-known American pictorialists. The auditorium of the store is admirably fitted for the holding of such an exhibition, and care has been taken, in the first two annual shows, to provide facilities thoroughly in keeping with the best salon-traditions. A substantial prize-list is provided, with a capital prize of one hundred dollars. Amateurs and professionals compete in these exhibitions on an equal basis. For two years, the capital prize has gone to entrants from the Atlantic seaboard, and California entrants, also, have captured a good share of the awards. Last year, more than 1,400 entries were received, and 400 prints were hung. Detailed prospectus of the regulations and awards is now ready and may be obtained upon application to Frederick & Nelson, Seattle, Washington.

The School of Photographic Proficiency

THE School of Photographic Proficiency which will be held during the month of August, under the sponsorship of the P. A. of A., in the P. A. of A.'s own building at Winona Lake, Ind., is evidently meeting with the approval of the craft, as over fifteen applications have already been entered.

This school will be a post-graduate course this year. That is, no students will be accepted who have not already worked in a studio. Full-fledged photographers, owners of their own establishments, as well as employees are entering their names, and as only a limited number can be accommodated, we suggest that those who expect to attend or to send some employee, make their applications at once. With each application the initial payment of ten dollars must be made, this ten dollars, of course, applying on the full fee of fifty dollars which all students must pay. This fifty dollars covers all

expenses of tuition and material for the entire course, lasting the whole month of August.

Board and lodging can be obtained most economically at Winona Lake—we understand from \$8.00 a week up, according to requirements. Winona Lake itself is a summer-resort, and a Chautauqua is held there during the summer. Concerts by celebrated bands and singers are given there daily, and the fee for attending these is very trifling indeed. There is a fine lake for swimming and boating, and everything else to make the stay there most enjoyable. In fact, the students will really be having a summer-vacation.

William H. Towles of Washington, D.C., is the principal instructor and head of the school. He will be assisted all the time by the best experts from all the various manufacturing concerns, by an expert retoucher, by lecturers and by all other well-known photographers who will go there to help Towles.

The manufacturers have been very generous in supplying the school-building with all necessary apparatus of every kind—lights, cameras, lenses, printing-machines, paper, chemicals, plates and films. There will be nothing missing that goes to make up a most modern studio-equipment, and the students will be taught the most modern ways of producing high-class photographs.

The fee required of the students is a most moderate one, and there will be *no extra charges* for books, materials, supplies, etc. It must be remembered that this school is not a money-making proposition. The expenses are guaranteed and underwritten by the P. A. of A.

The school-course will cover posing, lighting, negative making, darkroom work, retouching, printing—using all the standard brands of paper, etc. Lectures on the proper use of lenses, etc., the various forms of artificial light and other subjects will be given.

Applications, with the ten-dollar part payment, should be sent in to the General Secretary of the P. A. of A., at 421 Caxton Building, Cleveland, Ohio.

Toronto Camera Club

THE Thirty-First Annual Toronto Salon of Photography will be held at the Canadian National Exhibition from August 26 to September 9, 1922, under the direction of the Toronto Camera Club. Owing to the continued success of this annual event, the largest gallery in the Building of Applied Arts will be used. The Committee asks again for the generous support which pictorial photographers in the United States have accorded this salon in the past. Entry-forms and particulars may be obtained from J. H. Mackay, Secretary, 2 Gould Street, Toronto.

The officers of the Toronto Camera Club are: J. Addison Reid, past president; A. T. Cringan, honorary president; A. R. Blackburn, president; G. R. Smith, first vice-president; W. V. Mills, second vice-president; and Russ M. Collins, secretary-treasurer. The Salon Committee is composed of M. O. Hammond, J. Addison Reid, E. Hoch, J. R. Lawson, Frederick Baird, J. Eckersley, A. Van, E. J. Long, A. Briggsden, chairman, and J. H. Mackay, secretary.

A Double Feat

"CAUGHT AT THIRD" is a somewhat remarkable play and, ordinarily, difficult to photograph. The runner had made a three-base hit, but he began to slide into third base just as he had reached the bag, instead of doing so before. The consequence was that he overslid the base. Seeing this, the third-base man, having just received the ball from the outfielder, turned sharply and made for the bag and touched it a fraction of a second before the runner succeeded in doing so.

Data: April 25, 1922; good light, at 4 P.M.; 1.680 second; Soldier's Field, Harvard Stadium, Cambridge; 4 x 5 Graflex; 6 1/2-inch B. & L.; at F 4.5; plate; M. Q.; Azo print; Leslie R. Jones, of the *Boston Herald*.



"CAUGHT AT THIRD"

Courtesy Boston Herald
LESLIE R. JONES

Algodt K. Peterson

We are again called upon to record the passing of a photographer who was a credit to the craft, viz. A. K. Peterson, of Hartford, Conn. Mr. Peterson was born in Ulricehamn, Sweden, October 4, 1877, and came to America in 1899. At the age of sixteen, he began the study of photography at the Notman Studio, Boston, Mass. He then worked successively in studios in Hartford and Minneapolis, and returned later to Hartford, where he worked with Schervey & Curtis. He afterwards leased this studio and conducted it as the Peterson Studio, until 1920, when he started the A. K. Peterson Studio, at 86 Pratt Street, which he carried on until his death, June 3, 1922, at his home. He was sick with typhoid fever, for about ten days, and this malady developed into cerebro-spinal meningitis with fatal results. He was buried at Norwich, Conn., the pall-bearers being John H. Garo and Ralph P. Brackett of Boston, Harry Blackford of Hartford, and W. H. Mandan, Jr., of Hillsboro, New Hampshire.

Mr. Peterson married Miss Dora Menn in 1905, and is survived by his widow, his son Tom, the brothers and four sisters in America, and two sisters in Sweden. He was an officer in the Photographers' Association

of New England for several years, and was its president in 1921. Mr. Peterson was a man of endearing qualities, of upright character and a capable and artistic photographer, receiving many prizes in recognition of his skill.

\$15,000 Postage for an Ordinary Letter

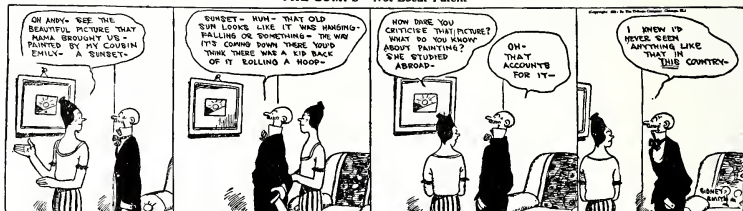
THE well-informed know very well that since the depreciation of European money-values, postage, among all other things, has increased inordinately. Whereas it used to cost one-fifth of a German mark to transit an ordinary letter from any part of Germany to the United States, fifteen marks is now required to perform the same

service, although by and by, this matter and others will go back to normalcy. In Russia, however, this depreciation has gone beyond all bounds, and the postage on an ordinary letter which costs five cents from the United States to any part in Russia, costs 30,000 rubles from that country to this! A ruble is a silver coin which is equal to 51 cents U.S. currency in normal times. A letter which came to the Petro-Exa office from a correspondent in southern Russia recently bore on the envelope two postage-stamps, one of 7,500 rubles, the other of 22,500 rubles—a total of 30,000 rubles!

For the Kinema-Enthusiast

THE interest in motion-picture photography continues to increase among amateur and professional photographers. New equipments and accessories are making their appearance continually. To bring some of the best to the attention of its customers, the Bass Camera Company, 109 North Dearborn Street, Chicago, has recently issued the "Bass Book of Kinema-Apparatus" which may be obtained free of charge. An article, "The Principles of Kinematography," by Charles Bass, in this new catalog, will be found of value to readers interested in motion-pictures.

THE GUMPS - Not Local Talent



Courtesy of Boston Traveler—Chicago Tribune Copyright

"THE GUMPS", CARTOON BY SIDNEY SMITH

For the Sake of Humanity

We call special attention to the announcement of Victor Gorbatchew, Kieff, Necrasowskaja 6, CdgJ, in our advertising-pages. When a gentleman of refinement and culture is compelled to resort to desperate measures to obtain food for himself and family, we believe that our readers will assist him, in every way possible, to obtain the necessities of life. The American Relief Administration in this country and at Kieff will furnish all required information.

Use of the Yellow Filter

IN using a yellow filter, says a writer in *Photographische Rundschau*, real advantage can only be gained when this is done systematically and intelligently. Among amateurs the selection of the filter is generally made without consideration and without regard to the kind of emulsion on the plate or the character of the subject, in spite of all the instructions and explanations given in the text-books. For instance, in making views with a distant background and in mountain-landscapes a much too strongly colored filter is often used. The result is that even the most distant features such as hills are brought out too distinctly and the natural perspective of the view is lost. The distant features appear to be brought nearer, the appreciation of the real distance of the individual objects is erroneous and the relations of space are falsified. But a too dark yellow filter may also bring another misinterpretation into the picture, if the exposure is not sufficient. The negative will appear hard and the shadows will lack tone-gradation and details. We cannot warn beginners too strongly against the unintelligent and indiscriminate use of yellow filters when on a journey; but previous study of filters of different strengths should first be made at home and the proper time of exposure for each studied. The darker filters should be used only when it is desired to emphasise some cloud-effect; but it must be borne in mind that this will affect the landscape very unfavorably.

An Excellent Printing-Medium

ALTHOUGH it might seem, to the general reader, that there would not be room for another printing-paper in modern photography, yet we can assure him that there is, in the form of Satista. We received a beautiful print from Willis & Clements, 1814 Chestnut Street,

Philadelphia, Pa., and we believe that our readers should become better acquainted with a printing-medium that yields such superb results. Interesting descriptive matter and samples on request.

Types of Cameras

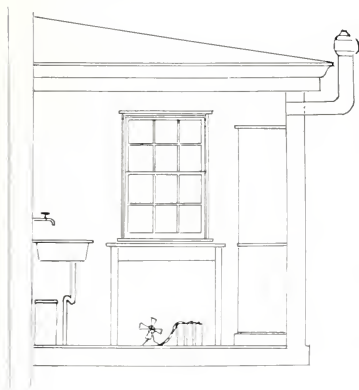
MANY photographers are now turning their attention to the purchase of some new camera for the season's work, and we are constantly being consulted as to the particular pattern which we recommend. While we have every desire to help inquirers, it is very difficult usually to give an answer that will satisfy both the recipient and ourselves. The pattern of outfit used is so very largely a matter of personal taste or individual preference that an outsider who does not know the photographer himself is at a loss which particular form to recommend. Whatever may be the type chosen, it is capable of doing some particular form of work very well, and of doing any other photography moderately well. We cannot think of any form of instrument that could not in this sense be termed suitable for "all-round work"; yet very often all the information we have is that the inquirer proposes to do "all-round work," and would like to know what instrument we advise him to get. Without wishing to shirk responsibility, the best course, if there is in the neighborhood a dealer whom the photographer knows and can depend upon, is to see him and talk things over with him. This has the advantage that the instruments themselves can be seen and handled—very often they can be tried; at any rate, the dealer, by a little judicious cross-examination, can ascertain a good deal better than we can hope to do through the post just what it is that would be likely to suit. Perhaps those who think of consulting us on this or kindred topics would bear this in mind; and if they do write, would write as fully as possible upon their views and preferences.

Of Value to the Photo-Finisher

THERE is no question that modern photo-finishing is a specialty that requires practical knowledge, business-ability and the best of equipment. The Northern Photo-Supply Company, 902 Nicollet Avenue, Minneapolis, Minnesota, has issued a valuable booklet, "Modern Photo-Finishing Appliances," which we believe should be read carefully by those who are in, or who contemplate entering, the business of photo-finishing. This booklet may be obtained free by writing them.

Ventilating the Photographic Darkroom

EVERY one knows that proper ventilation in a photographic darkroom is essential, although many of them are not looked after properly in this direction. Fumes from the acid-fixing bath and other odors should be quickly sent out of the area where the darkroom-man has to breathe, and whose health should be considered. The sketch shows a plan for a darkroom which was utilised from a small space then available and which has proved very satisfactory for the purpose. I worked out the ventilation-problem about the first thing I did. Wall-board was used to make the partition. A modern ventilator was installed, one of the type which revolves and carries the air out, inducing a certain amount of suction in its action; the pipe



running down into the darkroom. This ventilator is of the ball-bearing kind and the least amount of wind causes it to revolve if a fan is not used. I have a car and utilise the power from my battery to operate a fan which is placed at the bottom of the room so that a good clean supply of air is drawn into and expelled from the room at all times when any one is using the room. It can be run with dry-cells. I have tested the air repeatedly when the fan has been in operation, while I was working with various chemicals in the darkroom, and find that this idea expels the foul air satisfactorily. The size of the room I made was six by eight feet, and in it are a table, cupboard, sink and waste-basket. Gas is used for the illuminant and for printing, but the light from the window can also be used for daylight-printing. For the person or firm desirous of making a small darkroom in the corner of a factory-room this can be worked out very well, and the ventilation is one of the first things to be considered so that the whole outfit will prove a success and so that the worker in the darkroom can really be comfortable. Real harm is done where these precautions are not heeded.

C. H. THOMAS.

CUSTOMER: "How many people work in your office?"
Proprietor: "Oh, I should say, roughly, about one-third."—Exchange

Chicago Branch of New York Institute of Photography

MANY of our readers will be pleased to know that the well-known New York Institute of Photography, 141 West 36th Street, New York City, has opened another branch of motion-picture, portrait and commercial photography at 630 South Wabash Avenue, Chicago. According to the announcement, "here you will receive the same courtesy and service that we extend to all our friends in any part of the country." We wish the new branch the utmost success.



MARCH PRIZE-WINNING PICTURE,
JOHN G. MARSHALL'S FLASH-POWDER
COMPETITION. BY R. A. BARBER,
ELYRIA, OHIO.

Increased Sales Cause Reduced Price

WHERE an article of merit wins its way to the extent that increased sales make possible a reduction in its cost to the purchaser, we believe that it speaks well for the article and for the manufacturer. We are reliably informed by G. M. Milner, maker of the Milner Light-Gauge, Fairfax, California, that on account of a very satisfactory European connection and an increased demand in this country the overhead manufacturing costs have been lowered so that he has reduced the price of the gauge to \$1.00, beginning July 1. There is to be no decrease in quality nor in the discount to dealers. In fact, the dealers are protected by a special arrangement. We are glad to learn that business is picking up, and we hope that other advertisers will be able to report increased sales within the next few months. This is the time to advertise.

Building an Outdoor Darkroom

IN his entertaining department, "Piffle," in *The Amateur Photographer*, the Walrus—W. L. F. Wastell—refers amusingly to the construction of an outdoor darkroom by a friend.

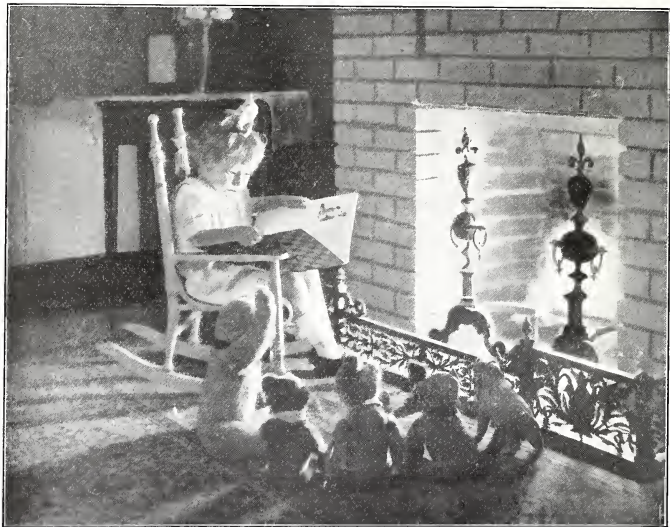
"The incident to which I refer was the Carpenter's first introduction to the art and science of photography, the said introduction taking the form of an order to build an outdoor darkroom. As some of my readers may some day wish to build one themselves, they cannot do better than learn how the Carpenter made his—and then do just the opposite. By the rule of contraries they ought to succeed.

"He first made a framework that looked like a hencoop

Medusa. 'No light can come through them pipes,' he said, 'but hair can.' So it could. So could water; and when the rain came the pipes made an ideal, if somewhat torrential and grimy, shower-bath.

"But the Carpenter sawed—I should say soared—to greatest heights when he fitted up the water-tank. He shut himself in the room, and by the light of a candle he screwed that cistern to the wall so that dynamite alone could have shifted it. Then he called to his boy outside to turn on the tap from the house-supply to see that the tank filled properly. He said he would turn it off himself, and the boy could go home. He went.

"The Carpenter watched the tank gradually filling, and as he leaned over he knocked the candle into the water. He repeated the Collect for the day, and long and



FEBRUARY PRIZE-WINNING PICTURE, JOHN G. MARSHALL'S FLASH-POWDER COMPETITION.

BY ARCHIE TOWART, JR.

on stilts. This he proceeded to cover with some old matchboarding that had absorbed the rains of years, plugging up as well as he could the countless shakes and knot-holes. The next day being sunny and hot, he took a day off, as was his wont on such days; and when he came back to the job the boards had shrunk to such an extent that the room looked like a wicker-cage. So he covered it outside with tar-felt, and lined it with cheap wall-paper.

"When he went inside and shut the door, the room was as hot as the place whereto the road was being rapidly paved with his good intentions. Therefore, he invented a ventilator. He did, really. It took the form of a cluster of short lengths of lead-piping, curled into fantastic shapes, and communicating through holes in the roof with the outer air. It looked like the head of

square measures backwards, and then he climbed down in the dark to go and turn the water off. And by my faith and truth, sweet gentles all, he had screwed up that cistern so that the door would only open 1 1/16 inches.

"You know the story of the brave little Hollander who held up a big Dutch canal with one hand till his compatriots came and rammed a clay-cork into the hole in the dyke. Even so, stood the poor Carpenter for hours plugging up the feed-pipe of the cistern. Then it rained, and Medusa began to play on him. There were more curly pipes than he had fingers to plug them, so he had to take it as a joke. He was found at last, and they turned off the water, and stripped off a sheet of felt, and he crawled out through the wall-paper.

"Moral. There is a good deal of phun in the practice of photography."



LONDON LETTER

CARINE AND WILL CADBY



YEARLY events used to come around once a year, or when we were very young, about once in every three years. Now they arrive at comet pace, so that it is more like one than twelve months between them. In fact, it seemed only the other day that we were visiting the Photographic Fair, going around its stands and meeting old friends.

Mr. A. C. Brookes must be congratulated on its organisation. To visitors, the whole thing seemed to run on well-greased wheels, and the exhibitors, demonstrators, officials, etc., wore a most placid and pleased air—not always an easy matter when the thermometer suddenly registers 80 degrees in the shade. It is an odd coincidence that the clerk of the weather always chooses this Fair Week in May to provide a burst of heat, and give us a foretaste of real summer.

An innovation this year was an exhibition of American photography. There were no well-known names in the catalog, and it was evidently a trade-show of the best professional portraitists in the States. To us, it was most interesting: for although there was much good straightforward work, naturally it did not bear comparison with that of the world-famous American masters whose achievements we see at our pictorial exhibitions. We noticed the names of a good many women photographers, which proves that across the water they have discovered—as we have, too—what an excellent profession photography is for women.

The biggest and most important stand in the show was Kodak's, fitted up just like one of their familiar shop-windows. All their newest inventions were in evidence; and portrait-film and its possibilities were amply demonstrated. Evidently, at last, the Graflex is to be pushed on the English market, and, fitted with a telephoto lens, it seemed capable of almost every kind of work. There are, of course, big possibilities in reflex cameras which the Americans understand at present far better than we do. But this year's show seems to demonstrate that the English are taking up this subject seriously, as most of the large manufacturers were exhibiting a reflex camera of some sort. Houghton's had one called the Ensign Tropical Popular, which suggests strength and reliability in trying circumstances. All the Ensign patterns are becoming very popular, especially the well-made, little, compact pocket variety. The Thornton-Pickard Co. naturally specialised in reflex cameras and have some most convenient types. The "Aidex," the reflex shown by Adams, is such a subtle and intriguing bit of mechanism that it required self-restraint not to play with it. But our own particular fancy is Newman and Guardia's 2½ x 3½ model. The thing seems to be alive. You see a closed-up, very compact, but inert little instrument. One word, or one press, and it springs into life, opening out all on its own, and at once, to the "ready". Another touch and it has automatically closed itself, and retired from the busy world, again an inert, phlegmatic box.

"N" and "G." cameras are famous for their workmanship. There is no suggestion of mass-production about their products. A purchaser may interview and discuss with the actual man who evolved the little miracle of ingenuity that he buys.

But speaking personally, we must confess our old-

fashionedness. Not being press-photographers, in the modern sense of the expression, and not, as a rule, having to rush exposures, we cling to our ground-glass-observation, preferring it to any mirror, even with spectacle-lenses fitted to enlarge the view. We score, in that we have a far lighter load or, alternatively, a much larger apparatus. We are on bedrock-terms with our view, as we know that what we see on the ground-glass must certainly be reproduced on the plate. There is no conjuring-trick of mirrors, or complex mechanics to get out of order, and we can, above all, be deliberate.

We have no further space to mention special exhibits, but the show was exceptionally good and complete, an unmistakable sign that the great photographic industry is recovering from the effects of the war, and that in every branch it shows fresh activity.

This is the month of picture-shows in London. The Royal Academy is the chief exhibitor, and is much visited by photographers. We do not always approve all we see there, and the newer art-movements are never in evidence. But it is intensely representative of the big British public, which dearly loves something it can understand easily. What attracts photographers to the Royal Academy is the immense number of portraits shown; and, although we photographers are always insisting how much painters borrow from the camera, there is no doubt that we can also learn much from paintings. This year, the most talked-of portraits are of Lady Rocksavage by Mr. Sargent and Mr. Sims, and the one by Mr. Sims is the more popular. But what we want to point out is that they are totally different, one would say, not representative of the same individuality. And again, these two portraits have nothing in common, so far as the sitter is concerned, with the picture of Lady Rocksavage exhibited anonymously a few years back by Sir William Orpen. Some say that this lady is such a complex personality, and that each portrait is faithful to some mood. But we should think it simply a case of seeing differently which is to be understood with such an individual art as painting; and the curious thing is, that we often get very similar results by photography and entirely different portraits of the same model.

There are notable signs that prices of photographic materials are still on the decline. The Phototype Company announces reductions in the prices of its papers, some of which were unprocurable during the war. And the *Professional Photographer* Kodak's monthly journal—and Houghton's *Professional Bulletin* both tell the same tale, which is no doubt in great measure responsible for the increased activity and interest of the general public in things photographic.

Many of our readers are probably familiar with the page of photographic humor called "Piffle" that has appeared for many years, first in *Photography* and later in the *Amateur Photographer*, signed by "The Walrus". But few, perhaps, are aware that the Walrus is Mr. Wastell, whose name is well known in the States, and who is President of the Royal Photographic Society this year. It has always been a wonder to photographers here how Mr. Wastell, week by week,

Continued on page 56.



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the law-offices of Norman T. Whitaker, Whitaker Building, Washington, D.C., from whom copies of any one of the patents can be obtained by sending fifteen cents in stamps. The patents mentioned below were the ones issued in May from the United States Patent-Office, the last issues of which have been disclosed to the public.

Photographic-Printing Machine is the title of the patent, number 1,414,582, invented by John J. Roth of Dayton, Ohio.

George C. Beidler, of Rochester, N.Y., has received patent, number 1,414,769, on a Method of and Apparatus for Developing Films.

1,415,230 is the patent number on a Photographic Printing and Numbering Machine issued to Glen M. Dye of Minneapolis, Minn.

James S. Bishop of Cincinnati, Ohio, has received his patent on a camera, number 1,415,514.

A Print-Storage Equipment for Cameras has been issued to John S. Greene of Rochester, N.Y. Patent number is 1,416,193.

Glen M. Dye of Minneapolis, Minn., has invented another photographic device on a Photographic-Print-Washing Machine described in patent, number 1,416,402.

1,416,502 is the number of the patent granted to Arlie Payne of Paragould, Ark. The patent is on a Multiple-Exposure Attachment for Cameras.

Reflex Photographic Camera has been granted to Percy G. Mason, of London, England. Patent number is 1,416,854.

Vera F. Langton and James J. Underwood are the joint inventors of an improvement on Print Washing Device. The number of the patent is 1,417,077.

Patent, number 1,417,403, was patented by Robert Demas Moninger of Washington, Pa. The device is a Photographic-Printing Apparatus.

In Business for Fun—Not Profit

How many photographers are in business seemingly for the fun of it? Well; quite a good many. PHOTO-ERA MAGAZINE has been urging photo-finishers, for many years past, to do business for profit, to produce *good work* and to charge a *good price* for it. A certain concern in Boston has for many years been doing very inferior work in photo-finishing, and seemed "to be getting away with it." But, when customers happened to take their exposed films to one of the leading three Bromfield Street firms, and saw how much better were the resultant prints, they never went back to the "certain concern", although the prices were lower.

Now, this price-cutting, or delivering poor work, in the business of photo-finishing, is all nonsense. It means a lot of work, yields the price-cutter no profit—except, perhaps, in the case of that "certain concern", which employs *inefficient* and *low-priced* help—and places him in an unfavorable light.

We understand that many of the best photo-finishers in the country are going to organize for their mutual benefit. They will have it in their power to educate

the general public to appreciate really first-class work (contact prints and enlargements). This will oblige the price-cutters—who are mostly poor workmen—to improve their output or else lose custom; for once the amateur-snapshooter understands that his promiscuously exposed films or plates *can* be made to yield beautiful prints—filled with detail and character—even at a little higher price, he will avoid the price-cutter, or the careless and indifferent photo-finisher, and patronise exclusively the expert purveyor.

Say it with a "Kodak"

EDITOR OF PHOTO-ERA: I notice that the phrase originated and used by a Boston florist, "Say it with flowers" is being applied as a variant to other lines of business. "Say it with chocolates", is one form; "Say it with books", is another. Now, so long as weddings are a feature of the month of June, why not coin the phrase, "Say it with a Kodak"? It's as good, practical and appropriate a phrase as any of the others, and I make this suggestion for the benefit of those who desire to make a wedding-present and don't happen to think of the right thing. The bride would be delighted to use it on her wedding-trip.

Respectfully, A READER.

An Attractive Used-Camera List

WE believe that many of our readers will be interested to obtain the new used-camera list issued by Robert Ballantine, 103½ St. Vincent Street, Glasgow, Scotland. Each outfit has been inspected by Mr. Ballantine, personally, and his experience of over thirty-five years is a guaranty of the quality and value of the cameras and lenses advertised. Most of the outfits are high-grade equipments made by manufacturers of international reputation. The list will be sent free of charge to any reader of PHOTO-ERA MAGAZINE.

London Letter

(Continued from page 55)

month by month, and year by year, could sustain and keep bright such a wonderful vein of humor, for many of his jokes live on, and have become photographic household-words.

We have been readers of and contributors to PHOTO-ERA MAGAZINE now for many years, and somehow—probably, thanks to genial editorship—there has been such a feeling of intimacy in our connection with it that our monthly London Letter is more a pleasure than a duty to write. We have felt that we really wanted to tell our American friends all about what we are doing and thinking over here. This feeling was naturally heightened when in the correspondence columns of the April issue we came on the concrete personal touch in the shape of a charmingly worded appreciation from a subscriber. Naturally, we go on our way rejoicing, and feel, if possible, in closer touch than ever before with PHOTO-ERA readers.



THE DRAGON-FLY
GEORGE S. AKASU



PHOTO-ERA MAGAZINE

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How I Photographed a Dragon-Fly

GEORGE S. AKASU



ONE day last May, I received a letter from Mr. French, asking me to write the story of my dragon-fly picture which was hung with eleven other prints at the Union Camera Club's annual show in Union Hall last April. I hesitated very much on account of my poor knowledge of the English language. In the first place, I thought that I could not make myself understood; but after reconsidering the matter, I decided that it might help someone who was interested in the same line of photography, and who might be struggling for success as I, myself, have been. So I took up courage and here is my story in very simple form.

The work turned out to be a simple matter in the end after lots of hard work and patience, and, incidentally, a lot of expense had been consumed in experiments.

It is a hard matter to photograph a live insect without studio-light, and an up-to-date apparatus. I studied handling butterflies, last summer, for three months, and after wasting a good many dozen plates, I accomplished nothing. Some of them moved during exposure; some of them didn't look natural, and all such and other little difficulties came up until the butterfly-time had passed, and then I had to give up my study of the subject.

One day, a friend of mine heard that I was photographing, or was trying to photograph, live insects, such as spiders and butterflies; so he handed me a dragon-fly, a rather small reddish-looking specimen. I got on the job selecting different flowers and branches trying to find something that might look a little artistic; but I could not seem to find anything suitable. One noon-day, a little later, as I was returning from one of my trips—I make three trips a day to the post-office—I espied a dragon-fly resting on the ivy-vine of the house. I had an inspiration

to try again, but in a different manner. I forgot to mention, in the first place, that I had made myself a net, with which to catch insects, out of a branch of a tree and a piece of mosquito netting. I caught a dragon-fly and killed it with potassium cyanide. Then I went to work photographing it, but with very little idea how to handle it or to proceed in an artistic way. I placed my camera near every window in the house, East, West, North and South. Finally, I hit upon the sun-parlor situated just outside the front-entrance. The sun-parlor is about fifteen feet wide, twelve feet high and six feet deep, having three sides, with just ordinary windows, each pane being about thirteen and one-half inches wide and twenty-three inches high and each panel has eight panes, four glasses in two rows. My background was an old yellow-colored window-shade about one yard wide, and three or four yards long. This I pinned onto the front-door with push-pins about five feet from the floor. I left the door open about ten inches to get a different light and shade on the background, which, of course, I had to arrange to suit the time of day and the subject.

Now I have described the place. By the way, I nearly forgot to mention the fact that the front of the house faces directly south. Then I got my camera and my subject, and trimmed my vine which is suspended with the aid of a few garden-props tied to the back of a chair, one in a vertical position, the others at an angle of about sixty or sixty-five degrees. Then I set the chair with the vine between the camera and background, near the background, on the right-hand side, *out of the field of view*. Now that I was about ready for the exposure, I found that the insect was not suitable to use. It didn't look natural, for the extremities had stiffened. It was dead, of course; and out of a dead thing one cannot photograph a live insect.

I quit, and called it the end of an imperfect day. I almost gave up in despair; but eventually an old saying came to my mind—"If at first you don't succeed, just try, try again."

This led me to make one more trial. I had many obstacles to face, the most important of all being the fact that I have to work or starve to death, and all this experimenting had to be done in my spare moments! It seemed to me that all the insects began to know me by this time, for whenever they saw me go out of doors, they flew up higher and higher—beyond my reach. I watched very carefully, however, and kept my net close by me, so that when one came near, I could pounce upon it. After days of watchful waiting, one came within my reach. I was upon it like a wild-cat, and got it, too. I kept it shut up for five days in the china-closet so as to weaken it and make it do what I wanted, *with life in it*. The next step was to wait for a suitable day on which to get good light and shadows. The very first good afternoon that came, I again took up my studies. This was the fifth day that my dragon-fly had been in captivity. I prepared an ivy-vine, set up the camera, put up the background and brought forth my model, having placed everything where I wanted it. I returned to my camera to have a look at things. While I was focusing, the insect began to claw and sprawl up and down, right and left, and even went so far as to fly away. Some nerve! It not only flew away once, but kept me chasing it a dozen times, more or less. Then the trouble began in earnest. My ivy-vine began to wilt in the heat, as did myself. I did not want to open the door for air, as that would spoil my shadow-effects. By this time, my vine was past any use. I had to go out into the garden for a new one, and begin all over again. I was now being confronted with my most serious obstacle. To my horror and dismay, old Sol was flying away from me this time. He was quickly wending his way westward, which necessitated moving my background more to the south-side in order to get the shadow-effect correctly. When I went back to my camera, this time, to see how things were, I found that shadows of the glass panel-frame were too prominent on the background. Everything seemed to be against me, and by this time I knew that I had to utilise every available moment to the best advantage, as "Time and Sun wait for no man." It was now almost five o'clock (standard time) and I had been working a good two and one-half hours, with nothing accomplished! I made another hurried attempt and found this time that the trees outside the sun-parlor window stood be-

tween the sun and myself, so there was nothing else to do but to quit, and that ended another imperfect day.

The next day I started in about twelve o'clock with just the same troubles as before. The insect refused to keep still, and I did not want to kill it; but I found that I must do something. It came to my mind that I might administer a little anæsthetic, so I began to search for some but found nothing. Then I suddenly remembered that I had had a toothache and had deadened the pain with oil of clove, so I thought this might in a way intoxicate the dragon-fly. I went to work at once, got a match, dipped it in the oil of clove and gave it a few drinks. This quieted it down a good deal for it did not seem to move. Then I said to myself, "Now's my chance!" I got to my camera—after, of course, first arranging my background, etc. All of a sudden, the insect's wings began to vibrate. I thought that I was beaten again, and almost gave up the idea of ever photographing a live insect. Anyhow, I said to myself, that I would like a chance. I watched and waited patiently. The wings still vibrated, yet the dragon-fly remained in its place. I was very anxious, and hesitated a great deal on account of the strong and incessant vibration. Then, holding my breath and again fearing failure, I began to make an exposure, a long one, too. I used a three-time color-screen and gave fifteen long seconds. For places on the background I used a piece of very thin, old silk to diffuse the highlight. I made three different exposures between two and four p.m., during which time I changed the whole arrangement twice. I developed the plates with pyro, A.B.C. studio-proportions, and was gladly surprised to find, when I had finished, that there was not the slightest sign of any vibration or any defect. I always use Wellington Anti-Screen plates when I can get them and a three-time color-screen in order to get better values of color. I called this the end of a perfect day. I concluded by feeling very sorry for the poor insect that had to give up its life for my success. I will add that it ended many a hard struggle on my part to photograph a live insect.



EVERYWHERE in our rapidly growing country the old landmarks are fast disappearing. The photographic recording of them is everywhere a duty. Such should be as perfect as possible. . . . The best obtainable prints of such subjects should be kept for reference at the public library, or local museum.

HENRY TURNER BAILEY.



ON THE RIVER

W. TRUESSEN

Art and Photography

C. J. BRODERSEN

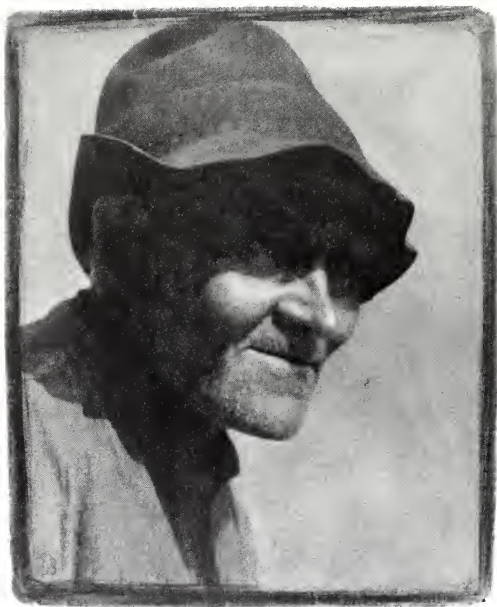


SOME time ago, the Editor asked me to write a short article to accompany the reproductions of some Danish prints in PHOTO-ERA MAGAZINE, and especially to tell something about the life in the Københavns Fotografiske Amatør-Klub. I do not believe, however, that such an article will interest many readers of PHOTO-ERA, as the life in our club is fashioned just in the same way as life in all other clubs which have artistic aims.

However, it is always a question open for discussion, whether photography may really be performed in such a way that the picture becomes of real artistic value, i.e., that the amateur is really able to put some of his own personal conception into it, and thus to tell us something, and thereby obtain the attention of the beholder. Amid these discussions the question is also raised, whether art and photography have in reality anything to do with each other—have had any influence upon one another; and here it is a fact, which even prominent art-critics have admitted, that they have, to some extent, influenced each other. A well-known English

art-critic, among others, has taken up this subject. He said, recently, that long ago, when photography was invented, the first impression was that it must become a very hard competitor of the art of painting, on account of its great power to quickly and exactly reproduce exact details; but it was very soon found that the photographic reproduction was not art, but only an exact reflection of the motives that, just by its abundance of details, often would spoil the general impression and have only an irritating influence upon the spectator. As is well known, there are three classes of men doing photography—namely, the pictorial photographers, the professional photographers, and the snapshooters, which latter only themselves enjoy by reproducing everyday-events and souvenir-pictures. This latter class, of course, is the largest, and its members do not take the least interest in artistic reproduction. The first-mentioned class, on the contrary, comprises only a very limited number of enthusiastic amateurs, who perform excellent and exquisite work.

Of course, it is now difficult to tell what influence the first photographs have had on the



PORTRAIT-STUDY

A. BLOCH

art-painters; but for those, who have had to do with painting details, photography must have appeared as a revelation. But interest in the reproduction of detail has declined during the course of years, and pictorial photographers, of late years, have tried by every means to get away from the representation of detail.

There are, however, certain effects, which may be originated by photography. The use of rapid plates and rapid lenses has greatly influenced the construction of the pictures, and as the use of the hand-camera caused the inclusion in the picture of a great foreground, this feature seemed for a time to have been adopted by nearly all of the art-painters.

The best landscape-paintings have always contained large sky-surface, low horizon, and a short foreground. The amateur, using his hand-camera, produced quite the opposite effect, while involuntarily inclining his camera towards the ground. In this connection, the fact ought to be

considered that the image seen on the ground-glass of the camera possesses a certain charm that has a similar tendency. Transposed into black and white, however, the picture will frequently be a disappointment. Nature, on the contrary, is not viewed in this manner, for the eye is not directed towards the ground, but towards the landscape and, consequently, the nearest foreground falls outside of the field of view and becomes less prominent.

The photographic lens, moreover, does not delineate correctly; it is apt to increase the apparent size of the near objects to the detriment of the distant ones, this not being in accordance with the picture seen by the human eye. Nevertheless, every careful observer will have noticed that this composition of the picture has influenced the painters, and one frequently sees them painting a picture in which they have placed too large and unnatural a foreground.

This is not the only way in which photography



COPENHAGEN, HARBOR-SCENE



NIGHT-STUDY

P. LUNDSTEEN

has influenced the art of painting. In painting, the main interest is centered on the outline of masses which should be pleasing to the eye. In photography, on the contrary, awkward shapes will often be produced, unless great care be taken; even the figures and their garments assume queer, angular shapes, not to mention those which buildings and the like may assume. Such features appear to have influenced even the style of some painters by reason of being something uncommon and, therefore, pleasing to the public that, in its ignorance of real art, demands something novel and strange.

Even in photographs of interiors, queer effects may be produced; for instance, persons sitting farther away become depicted on the top portion of the picture. Similar features may be noticed in modern art-painting, but the impression produced is not natural. Chairs and tables

ought to stand on a horizontal floor and be surrounded by vertical walls.

It is, however, not the able art-photographer who produces this kind of picture. He has gradually learned what good picture-composition means, and he endeavors to avoid this kind of unnaturalness. Many a progressive art-photographer knows the secret of picture-composition better than any artist. The excesses are found in the work of beginners, or the ultra-modern art-photographers despising to follow the straight road of art and believing to become greater art-photographers by imitating the excesses committed by many modern art-painters.

Presumably, I have now already occupied too much space in PHOTO-ERA-MAGAZINE; but I should be very pleased, if these lines contain some features of interest to the many photographers who are readers of this periodical.



THE LAVISHNESS OF NATURE

Copyright, Chas. G. Jones

CHAS. G. JONES

Photographing the Diamond Cave, Ozark Mountains

CHAS. G. JONES



It is to be regretted that we photographers do not get skinned noses every time we make mistakes. If we could, I am sure that we would not only make fewer blunders, but we would make more progress and everything, but our looks, would be helped. I am going to tell you how a little forgetfulness forced me to be resourceful and incidentally caused me to get a badly skinned nose in the meantime. The memory of that incident has prevented my making the same mistake again.

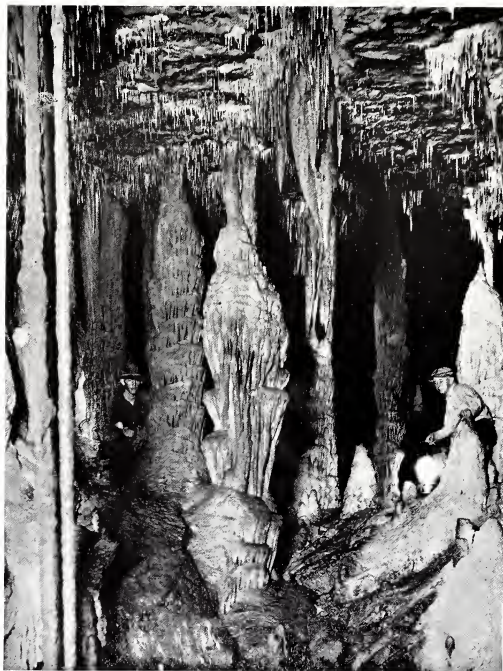
I was called upon to photograph the Diamond Cave which is situated some thirty miles from the nearest railroad-point, in the heart of the Ozark Mountains of Arkansas. The cave, opened recently to tourists, is three miles west of Jasper, Ark., which is situated on the new Jefferson Highway running south from St. Louis, Mo., to Little Rock, Ark., and is probably one of the most wonderful and extensive cave-formations in any part of the world.

Being a field-photographer, I pride myself on carrying in my "old kit-bag", emergency equipment for any kind of work. When I arrived at the cave I was thoroughly prepared, as I thought, to proceed with the work in hand. But when I

delted among the paraphernalia I was amazed to find that I had forgotten to put in any part of my flashlight-equipment, except the powder.

Not wishing to appear as a novice other than to myself, it was "up to me" to light the cave and make the pictures as though I had been fully prepared with the best of equipment. I unearthed a large cigar-box, knocked out the front side, raised the lid-back perpendicularly and tacked a stick, about two feet long, to the back of the box and lid, allowing the stick to extend well below the bottom of the box and thus form a handle. Placing my film-holders in one compartment of my knapsack—I use films altogether in the field, on account of their lighter weight—powder in another, several sheets of dry paper, some extra batteries for the pocket-flashlight and my camera, a 5 x 7 Eastman View fitted with a Velostigmat F 4.5, Series II, 9-inch focus, in a close-fitting carrying-case, I announced to the guide that I was ready to proceed.

The Diamond Cave has never been explored thoroughly, although its depths have been penetrated many miles. There is some water in it but the cave, generally, is very dry, with the walking excellent. The air is good with a temperature of about fifty degrees. The formation



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SOLID-ROCK FORMATIONS

CHAS. G. JONES

is wonderful; purest white, yellow, brown, red, pink and black limestone-stalactities and stalagmites as fine as a cambrie needle or as massive as giant monuments are to be seen at every turn, and no two are alike. They glitter and sparkle under the light of the lamps like millions of diamonds, hence, the name Diamond Cave. One never tires of looking at the beautiful formations of this subterranean cavern, although one's body may become utterly exhausted.

For nine hours we rambled over the floors of the great cave, making in all, fourteen exposures with the cigar-box flash-machine. I spread the powder over the bottom of the box, inserted the end of a piece of paper in the powder, allowed the other end to protrude over the side of the box, then, when I was ready to expose I lighted the

end of the paper, stepped behind the camera and waited for the flame to reach the powder. To focus, I opened the lens wide, placed a light at the extreme edges and in the foreground of the view that covered the groundglass, and in all of the accompanying pictures, stopped to F/16 when making the exposure. The most difficult problem encountered in photographing a cave is in being unable to place the camera at the right spot to obtain the desired view. Many of the most beautiful spots in the cave are not photographed for this reason.

All went well with the flash-machine until the fourteenth picture. I loaded it with a heavy charge to penetrate some very deep shadows down the passageway. I lighted the paper and held it aloft with the utmost confidence. There



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ACRES OF STALAGMITES
THE GREAT WHITE DOME
CHAS. G. JONES



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THREE MILES IN THE CAVE
STALACTITES BROKEN BY BEARS
CHAS. G. JONES

was a terrific flash and a deep rumbling as the cavern reverberated to the noise of the explosion. A million stars appeared on my horizon—that box separated from its handle and the corner caught me fairly between the eyes and barked my nose quickly and painfully to the extreme point.

I have enclosed a few pictures and the reader can be the judge of my success with the improvised flash-equipment. Needless to say, I have never again forgotten part of my equipment. A little resourcefulness will overcome the difficulty I had and also a missing focusing-cloth, a broken tripod or groundglass; but, take my advice, fellow-workers: never forget the flash-powder if you wish to photograph a cave.

For the benefit of readers of PHOTO-ERA MAGAZINE who may not know of the Diamond Cave and its beauty, I give some interesting facts in connection with the pictures that accompany this article.

Picture 1. Something of the lavishness with which nature decorated the cave-walls and ceilings can be realised by this photograph six miles underground. (Note)—This is as far as we penetrated; but the cave was as large, in places larger, than it was nearer the entrance. In only one place did we have to crawl, and then only for a few feet.

Picture 2. Three miles inside the cave. The little column in foreground touched the floor and the ceiling: it is 23 ft. long and about 2½ in.

in diameter; it is the same diameter its entire length. There is nothing loose and dangerous about the rock-formations; the walls, ceilings and nearly all the floors are solid limestone.

Picture 3. Acres and acres of stalagmites, columns and spires of varied sizes and colors with smooth paneled ceilings, fringed with candied looking stalactites; four miles underground in the Diamond Cave, Newton County, Arkansas.

Picture 4. The great white dome in this picture is hollow and the threads of stone on its sides act as the strings on a piano, giving off clear musical notes when touched with stone or metal. Some of the stalagmites in the distance are over 25 ft. high. This is called the music-room, the dome, at front, is called the piano, it is about 12 ft. high and 7 ft. in diameter. Two miles inside.

Picture 5. About three miles inside the cave. This cave is centrally located in what is destined to become soon the greatest playground in America, "The Ozark National Playground" in "The Land of a Million Smiles". The Ozark Mountains cover quite an area in southern Missouri and northern Arkansas.

Picture 6. It can be seen in the photographs that some of the stalactites have been broken. This was probably done by bears many years ago. Many bear-tracks, made during the process of formation of the cave, are now plainly seen in the stone-floors of the cave. Three and one-half miles inside the cave.

Electro-Photography

ARTHUR PALME



THE April issue of PHOTO-ERA MAGAZINE contained a very interesting article, which the author chose to entitle "How I Shocked a Plate." I'll bet that many a reader who saw the photograph that accompanied this story, was guessing all he was worth as to what that feathery clump of white, woolly things might be; or possibly, what kind of new-fangled photographic tad this might represent. To me, that little article was of greatest personal interest, and I thought that some of the more technically inclined readers might be given a hint for further experimenting along that little-investigated and fascinating line of *electro-photography*.

If Mr. Stephan had gone only a step further, he would have re-discovered what I found some nine years ago, the result of which was published in the *Electrical World*. Suppose that you

chose exactly the same arrangement, and the same simple apparatus as described in Mr. Stephan's article; that is, a few dry-cells, a piece of tin-foil, a photographic plate or film and some wire. In a darkroom, illuminated by photographically safe red light, place the tin-foil on the table, lay the plate or the film, emulsion-side up, on the foil, and then lay any kind of a metal coin, a medal, or other relief-stamped or deep-stamped metal piece directly upon the plate. Connect the ends of the spark-coil to the tin-foil and to the coin, and close the battery-circuit just for a second or two. You will be amazed, that after developing the plate you will find a *perfect negative of the stamping*. Surrounding the edges of the metal piece will be found the same feathery streamers as on "the shocked plate." A single discharge from a quart-size Leyden jar, or an exposure of a fraction of a



ELECTRO-
A. PALME

ELECTRO- PHOTOGRAPHS

A. PALME

second from an ordinary alternating current of at least one thousand (1000) volts, will give the same result. This method was suggested to photograph coins, medals, flat engravings, etc.

But it is not necessary to use a plate or film. A piece of bromide-paper or even of Velox or Cyko paper will give the same result, if substituted for the plate. Of course, in this case, a negative and side-reversed image will result. And as these papers are all slower than a plate, a somewhat longer exposure has to be given. If a sensitised paper is used instead of a glass-plate, the spark from the spark-coil may be sufficiently strong to puncture the paper. The use of a clean glass-plate between the tin-foil and the sensitised paper is therefore recommended.

The illustration with this article shows both kinds of electro-photographs, *i.e.*, positives, obtained by printing from a glass- or film-negative and also some originals, made directly on bromide paper. All the latter are side-reversed.

The explanation of this peculiar phenomenon seems to be this: The tin-foil and the coin, separated by the rather thin glass-plate, represent what is called, in electrical parlance, a condenser. Applying a high-voltage current to the two metal plates will charge this condenser, and this will be accompanied by the generation of visible dark-violet light, a great amount of invisible ultra-violet light, and of ozone. The latter, which is only a by-product of our little

experiment and has nothing to do with the result, can be smelled easily if the spark-coil is left on for a few minutes. The violet and ultra-violet light, however, affect the photographic plate as strongly as daylight, and hence the dissociation of the bromide of silver, disclosed after development. The nearer the two metal plates come to each other, the more of these violet-rays will be generated, and the more of the silver-salt will be dissociated. That is why the high parts of the coin will be rendered darkest and the depressed parts, further away from the plate, the lightest. Making a print from the negative will reverse the contrast, and will give the true appearance of the stamping.

In our days of automobiles and radio-enthusiasts, spark-coils and dry-cells are available easily and everywhere. Any amateur, so inclined, should therefore have no difficulty to duplicate the above-outlined experiment, which will give him a few evenings of a new and fascinating pastime. Just one little warning: keep your hands off the spark-coil wires. There is more "kick" in a spark-coil than in the wildest "moonshine" rum. I *know* there is. I got one at that experiment myself, and got it in the darkroom. And when I jumped, I upset the hypobox, which emptied on a batch of perfectly good 5x7 plates, cascaded on my trousers, bounced off against a tripod-leg, upset . . . oh, never mind, it did a lot of damage.

Photography for Women

GRACE R. DEPPEN



NE of the most pleasant professions for women is photography. This is especially appealing to the wife and mother who longs to make some money independent of the husband's earnings; but who would have to neglect her home if she had outside employment. In photography, most of your patrons come to your home for you to make their pictures.

A small town or a prosperous farming community offers just the opportunity for an ambitious girl or woman. Here the professional photographer is absent because there would not be enough business to pay him. This fact is the woman's opportunity for she would not need to make as much as he would to pay her well.

As to learning how to do good work, this phase of the subject need not trouble an intelligent person. Dressmaking, stenography, millinery, school-teaching, or any of the various trades which women follow, require at least a year to learn, and most of them longer, and necessitate leaving home. Photography can be learned in three months at home and without a teacher. One of the many books of instructions especially written for amateur-photographers will teach enough, and profiting from the mistakes made, a persevering person may learn what to do by experiment and without a personal instructor.

A modest equipment of camera, tripod, background, reflector, tank, trays, lamp, thermometer, scales, graduates, plates, chemicals and paper can be bought for fifty dollars, and includes enough of everything to learn with. A postcard-size plate-camera is best for a beginner, and a cheap lens is sufficient until she has mastered the rules of exposure, development and printing. When she is sure that she means to keep on with the business, her ambitions will aspire to a five by seven camera and an anastigmat lens. This size is needed for landscape-work and groups, and the speedy lens to meet any emergencies in lighting and rapid motion.

The writer knows whereof she writes. For the past ten years she has filled the rôle of general photographer in a country-town and reached out and done work in a surrounding radius of ten miles. It is work which is seldom monotonous, is interesting and more remunerative for the least effort than anything else I could do at home. Babies' pictures are my most frequent work—every birth-certificate records a pretty certain patron. As for myself—I began to learn while

teaching school, made the most of vacation-time, and gradually worked up quite a line of business. I have calls to make and many stock-pictures of houses, funeral-flowers, church-decorations, corpses, weddings, school and lodge-groups, auto and picnic-parties. These are side-lines; portraits of all ages are my main work. To disturb my homework the least possible, I require portrait-patrons to come to me; but old people and babies, in the non-travel class, I photograph in their homes. Picnic-parties and others in groups, of course, I photograph wherever they are gathered, and usually selling many pictures from one negative makes a good profit on this work.

The beginner should experiment on her friends and relatives under different lightings until she feels confidence to "hang out her shingle." By using a very fast plate, like the Seed Graflex, she will find an exposure of one second is sufficient in a room or corner lighted by two windows. Many babies, you will find, move more quickly than this. The photographer will soon learn to note if they move during the actual click of the shutter, so that a second exposure must be made. Later, when she can afford an anastigmat lens, the cheaper plate of ordinary speed will be sufficient. Having to make more than one exposure, cuts down the profits, and I would not advise doing it unless there is no doubt that the subject moved. There is a class of careless persons who will want the artist to "take another, in case the first is not good," but she will use her own judgment rather than waste her plates at their request. There have been many times when I preferred to expose several plates rather than make another trip to a house for a portrait of a restless child or a nervous, old person. Make a few good rules and insist on them, if you would make money in this business. It is well to require a deposit at the time of the sitting, and not to give "proofs" on small orders, simply asking them to leave to the photographer's judgment whether a negative turns out good enough to finish the order. There will seldom be a complaint, if the photographer will talk just right to them at the beginning.

I have never learned to do retouching, because I have weak eyes and feel it is cheaper for me to send the few negatives that require it to a nearby city, where a professional retoucher does it quite reasonably. Photo-supply houses can give you addresses of persons who do this work, or you may learn to do a little yourself; but it requires a firm hand and good eyesight.

To do the best work, you should have a certain room in the house for exclusive studio-work, where you can pose your patrons in privacy. Here you will hang your background permanently and have the reflector and sitters' chairs always ready. A room with north windows is preferable, an eastern exposure comes next, and, if you must, western or southern windows can be screened and arranged to serve your purpose. You may have to begin by using a parlor or living-room. Here you will have to move the furniture out of range of the camera, put up the background and reflector, and chase away the inquisitive members of the family who like to see what is going on.

I have done general photography so long, and am still so enthusiastic about it, that I like to see girls entering it as a profession. A few years' practice in your own business may lead you to a pleasant position with some fashionable city-photographer; who can tell?

The best advice I can give to a prospective woman-photographer is to buy a modest equipment; to subscribe for as many photographic magazines as she can afford; to get a reliable book of instructions, and apply her intelligence in the same degree she would on any other profession. Learn to do both tank- and tray-development, never forget the importance of temperature nor the necessity for cleanliness in the dark-room. For the latter, by the way, a closet with

shelves may be utilised until it is found advisable to build a *real* darkroom. Many people have a corner of the cellar partitioned off. This is easy to make dark and the liquids will not freeze there, although if tank-development is used, arrangements should be made to keep the solution at an even temperature, otherwise underdevelopment would result.

Of course, you will make up your developers and the various baths, as this method is so much cheaper than buying them ready prepared. If ever I go into the mail-order business, I intend to cater to the amateur photographer and sell these ready-prepared developers and baths, for I know that there must be a wide margin of profit in them. Buy your hypo by the ten-pound box at least, and the developing-agents, pyro, hydrochinon, metol or any others you learn to prefer, by the ounce, perhaps, to begin with. By carefully weighing them on your scales, and mixing with soft water according to the formulæ that come with the plates and paper, you gain a great deal of information as to the workings of the various chemicals, and save money, besides.

Select some standard make of plate and paper, and stick to them until you have mastered exposure, development and printing. It is foolish to think that poor pictures are the fault of plate or paper, when the manufacturers have been making them so long.

The Sentimental Photographer

SIGISMUND BLUMANN



F the careful observer will let his mind seek and dwell awhile on the character and temperament of the amateur-photographer, he will be interested to find him a gentle fellow, with the eyes of a poet, the soul of an artist, and that love of Nature and quiet which most frequently goes with such individualities. I refer to the amateur-photographer whose ambition is to make pictures. The busy man who snaps anything that happens along and lets the drug-store do the photo-finishing is another story, as Mr. Kipling would say. To such, as of whom these things are said, photography is not merely a pastime but a sentiment. The young have a prophetic instinct; and the love of fixing pleasant times and places urges them. Their elders have a fancy for retrospection and humor, the developed habit of making for the eye lasting remembrances that may vividly let

them live over and over again their happier moments and experiences long since past.

From where I stand, on a little hillock of middle life, a larger view is mine of youth on one side and old age on the other. God be praised, I have not outgrown sympathy with the one, or understanding of the other. It is the privilege of a man of fifty to be a very aged person to the boys under and about twenty, and to be a very young thing, indeed, to the patriarch of seventy-five. So you see me an old-man-young-boy, and qualified to speak of things of which I do speak, in this strain. The latest camera with all its improvements and some of its "Talking-Points" which look like improvements but are not; and the old, old, oh very old, box with its square bellows are both dear to me. It has been my rare privilege to bring together the winner of a recent salon medal and one who used to work in wet-plates.

Now and again, some enthusiast becomes imbued with an idea that it is wasting time and money in what of these he devotes to photography. And some Old Timer becomes convinced he has outgrown this enjoyment, as its being one of the indulgences of youth. Let me sing to you, what I would say to you about this, in such voice as is given me.

Pass thou not carelessly the daily joys
That childhood hath, but play
Whilst still thou canst, with toys,
Too soon must come the day
When pleasure cloy.

Deal thou not heedlessly with youth
But make them friends, and love
Them whilst thou may. Forsooth!
The sun is shining bright above,
Dream dreams and pass the truth.

Maturity hath recompenses, too;
They are but recompense at best,
For what the present offers you.
Old age is never so well blest
As when it can forget what's true.

Age dreams of days that used to be,
But Youth hath golden dreams
Of times to come. Set Fancy free,
Seek pots of gold where rainbows gleam.
Today shall ne'er return to thee.

Age! That means him who no longer believes that there is a pot of gold at the end of the rainbow. And the pleasures of life do not cloy to the youngster of eighty who still has hope in his heart and something he loves to do for the sake of the doing. And though a *you* has crept in among a lot of thee's and thou's, let that pass as poetie license and take the truth, that I believe, threads the crudely turned beads of rhetoric that you are reading.

That same pot of gold may be any sort of hope, aspiration, ambition—a camera, a tripod, enough plates or films and the conviction that a salon-picture waits somewhere along the day's hike for us to make. Don't you see what photography means outside of tangible, material things? Can't you understand now why you had a feeling that your camera meant something

to your emotional side? Of course, you did and of course you do. Did you ever hear a real artist talk of his brushes, paints, and palette? Did you feel as if he were talking of dear persons, not things? You know what I mean. So let us go on making pictures as we are permitted to find time for the doing; and, without knowing or analyzing, develop our eyes to see the lavishness of Nature in her bestowal of beauty, cultivate our minds to poetie sympathy with field and stream, and water, hills and valleys and clouds and blue skies. We are all traveling a long road to a certain goal—the one great goal which we shall not fail to reach, which we can never avoid reaching. And the box with its polished glass-eye shall help to make that road seem shorter, easier and pleasanter.

That one is blest who from Life's vast expanse
A little corner saves from other use,
And keeps a modest garden there:

With pansies, hollyhocks and heliotropes,
Poppies flaming, violets and border phlox,
Color-riot, mingled scents,

Meandering amongst these varied plants
An aimless, graveled path must wind away,
Beginning at a picket-gate—

Its end where broods a weeping willow tree,
This ever quiet and old-fashioned spot
Shall be the Garden of his Youth.

Where, youth departed, he shall wend his steps
Away from all the bustling cares of life,
And live in other days again.

Then every pansy-face shall turn to him
And make him company, like long ago:
The many scents be Memory.

School-days, school-mates, Redivivus! His youth
Shall bloom about him once again, until
His tottering steps shall find the way

To where that swishing willow bends its boughs,
And there in Heavenly quiet he shall rest
Beneath sun-spangled shading green.

Spring, summer and portentous fall shall pass
And when the winter's rigors shall have passed
Behold his couch, a verdant mound.



Through the Berkshires Over the Mohawk Trail

WILFRED A. FRENCH, PH.D.



WHEN the tourist-season is at its height—and the height is like an extensive plateau after it has been reached—the most frequent question heard among New England motorists is "Have you been over the Mohawk Trail?" In nearly every case the answer is in the affirmative; if otherwise, the person questioned is urged strongly to make the trip at the first convenient opportunity. For one reason or another, this sage advice cannot always be followed at the time it is given. Of course, much depends on the direction from which the motorist approaches the Mohawk Trail. The traveler who lives West of the Hudson River will approach the Trail from the West, via Albany, and thence, over the Taconic Mountains, to Williamstown—beautifully situated and surrounded by purple-hued mountains dominated by the nearby Greylock range—via North Adams, directly over the Trail proper, which runs over the highest point of the Hoosac Range and the Whitcomb Hills—down into the Deerfield Valley and, eastward, through delightful towns, to Boston—a total distance of one hundred and ninety miles of road to traverse.

At Greenfield, the tourist has the choice to motor over excellent State roads, to the White Mountains (northeast), Boston (east), or Springfield, Hartford and New Haven (south). Another favorite route is from Albany to Williamstown or North Adams, via Pittsfield, which takes the tourist through some of the finest parts of the Berkshire region. To tourists who motor to New England from New York City, and who desire to include a trip over the Mohawk Trail, several routes are open—along the eastern bank of the Hudson River, including places associated prominently with the American Revolution, to Poughkeepsie, thence in a north-easterly direction, via Lakeville, passing along a stretch of a few miles through sections of New York and Connecticut into Massachusetts, where, at South Egremont, the celebrated Berkshires begin their spectacular course northward. Generally, a long stop is made at Great Barrington, with its notable, historic show-places and wonderful scenery. The journey is continued through those celebrated garden-spots, Stockbridge, Lee and Lenox to Pittsfield, the exact center of the Berkshire country and splendidly situated. The trip over the Mohawk Trail may now be begun at Williamstown, sixteen miles distant, north, from Pittsfield, Massachusetts.

It is not the purpose of the writer to give the history of the Mohawk Trail, or an account of the construction of the new State highway which runs over it, more or less, for a distance of sixteen miles, but rather to offer a few interesting details which will suffice to meet the requirements of the tourist-motorist who is bent upon enjoying the scenery and photographing the salient points of historic and pictorial interest on the way. For detailed and trustworthy information regarding the old Indian Trail, the student is referred to "The Mohawk Trail—its History and Course", by William B. Browne, North Adams, Massachusetts.

The Mohawks were an Iroquois tribe of Indians which formerly occupied the Mohawk Valley—a magnificent view of which, by Frederick B. Hodges, adorned our July number. This beautiful and fertile valley extends along the Mohawk River from Rome to Cohoes on the Hudson. The Mohawks were an exceedingly warlike people and, being at enmity with the Penobscots of New England, they crossed the Hudson and blazed a trail from the eastern bank of that stream through the northern section of the Berkshire Hills into the Deerfield Valley. In all their warfare, the attacking parties crossed the mountains over this trail which became known as the Mohawk Trail. Not satisfied with molesting a rival Indian tribe, the Mohawks raided New England, attacked the white settlers and, later, other Indian tribes. This trail is supposed also to have been used by warring Indians during what is known in New England history as King Philip's War, 1675 to 1676, of which the Bloody Brook Massacre, at Deerfield, forms a thrilling chapter. Thus, the region through which the present Mohawk Trail passes, from Greenfield, including Deerfield Valley to Williamstown, Massachusetts, and beyond, even across the Hudson River into New York State, is filled with historic and legendary interest which gives it great distinction.

In view of the physical difficulties encountered by the engineers in constructing the present Mohawk Trail—a superb and justly celebrated highway—the original path trodden by painted, mocassined warriors was followed only in a general way; but in certain sections it is identical with the new road. Had it not been for the consideration of Whitcomb Summit, the highest elevation of the present trail, as a desirable feature of supreme scenic interest to the tourist, it is highly probable that the new State highway



MOHAWK TRAIL - OLD RIVER
WILFRED A. FRENCH



DEERFIELD RIVER AT CHARLEMONT

WILFRED A. FRENCH

would have been made to conform more closely to the old Indian trail, although enough of it has been included in the new road to justify the adoption of the name of a famous Indian tribe.

In approaching the Mohawk Trail from the east, the beginning is popularly regarded to be at Greenfield, although at the corner of Middle Street (State road) and Massachusetts Avenue, in Lexington, a suburb of Boston, there is a conspicuous sign, with an arrow pointing in a westerly direction, which reads: "Mohawk Trail"! Indeed, we followed this suggestion literally when, on the morning of October 6, 1921, we began our first journey, in an automobile, to this famous region. The course followed was Boston, Lexington, Concord, Ayer, Fitchburg, Gardner, Athol and Greenfield to Charlemont, where we arrived at 5.45 in the afternoon. Our experiences thus far had been quite delightful. We had traveled mostly high above the railroad, through lovely towns, on smooth State roads and along pretty rivers. After leaving Fitchburg, we were favored with enchanting views of the distant Berkshires which blocked the horizon in the West. At Greenfield, we had the pleasure to travel over the brand-new road over Shelburne Mountain replacing the old, steep, dangerous one with its many sharp curves. This

superb cement-concrete road varies from eighteen to twenty-four feet in width, winds high along the mountain-side and commands views of unusual beauty, near and far. With Shelburne and Shelburne Falls, on the other side of the mountain, behind us, we entered Deerfield Valley, friendly hills welcoming us on both sides, while the sun was disappearing behind the Berkshire Hills. We stopped at the Inn at Charlemont—historic, immaculate and satisfying. The Mohawk Trail, proper, begins at Charlemont, and for this reason we made a photograph, from the southern bank of the Deerfield River, before we resumed our journey on the following morning. The highest peak in the background of our view is Whitcomb Summit, across a lower shoulder of which runs the Mohawk Trail. An illustrated booklet descriptive of this locality and several adjoining towns with their interesting local histories—"Over Mohawk Trail"—has been recently published by Mrs. F. B. Caldwell, East Northfield, Massachusetts.

We re-enter our automobile, recross the old, wooden, covered bridge, turn sharply to the left and experience a feeling of pleasant anticipation at the thought of being at last on the famous Mohawk Trail with its historic associations.

Three miles beyond Charlemont, we cross the



MOHAWK TRAIL—MT. GREENLACK

WILFRED A. BRUNSH



MOHAWK TRAIL—FROM HAIRPIN TURN

WILFRED A. FRENCH

Deerfield over a handsome, three-arch, cement bridge, leaving the river with the railroad to take an irregular northerly course towards Vermont. We are now beginning the ascent of the eastern slope of Florida Mountain or, as it is sometimes known, Hoosac Mountain. The stream at our right, below us, is the Cold River, and we are advancing virtually over the historic Indian path which lies below the macadam surface of the new Mohawk Trail. The scenery is wild; virgin forest is above and below us, high vertical walls have been chiseled out of the solid rock by the engineers who, throughout, have shown marked skill in constructing this wonderful road. The minimum width is twenty-two feet, permitting two vehicles to pass each other at any point. In some places it was necessary to do considerable blasting to make a shelf from sheer walls of rock. One cut in the solid rock is twenty-seven feet deep. Many of the earth-slopes of the mountain are cribbed above the road. In the length of the road, there are two hundred and ninety culverts and small bridges, and two large concrete bridges. Indeed, as an example of scientific road-building, the new Mohawk Trail compares favorably with the famous roads in the Swiss Alps. The heights scaled are not great—the summit of the trail is nearly twenty-one hundred feet above sea-level—but the

work is just as fine an example of engineering. We are thus constantly reminded of the handiwork of man which enables us to enjoy, without effort, the glories that greet the eye at every turn. The ever-ready camera rests in our lap, and we are experiencing the unique sensation of being, as it were, a feature of a moving panorama that is being kinematographed by a motion-picture cameraman! Our own picture-making must rest in abeyance—for the time being. It is mid-autumn, the sixth of October, and a clear, sunny day. The sumptuous beauty of the season's foliage—nowhere so glorious and diversified as in New England—fills the eye and expands the soul. The eye is ravished by the wonderful harmonies of color, from the sombre tones of the evergreens to the resplendent notes of birch, maple and beech—now in shadow, now in sunlight. Thousands of tourists have motored over this route and gazed with rapture upon the beautiful, wooded mountains, streams, passes and bridges which make the noble landscapes that lie around them. The impression which wildness and majesty of scenery make upon the senses is singularly grand and uplifting to those privileged to feast upon its loveliness. The Cold River, whose waters are not so high as they are in the spring or in early summer, is now at our left, below us. Ahead of us, the road makes a boldly

sweeping curve towards the left, revealing a sight that bids us move slowly and, presently, come to a stop. Obeying an irresistible impulse we step out, camera in hand, look back and behold the Cold River Gorge. The picture is one of compelling admiration. After a critical examination of the theme, with respect to pictorial composition, we decide upon a favorable viewpoint. We clamber over the wooden railing, carefully secure a reasonably sure footing, about ten feet below the edge of the road, and make a vertical picture of the scene. Returning to our

the Trail at the Charlemont end up to the hamlet of Drury, a distance of five miles, and extends back on each side to the summit of the mountains which form the Cold River Gorge—a distance of one-quarter to one and one-half miles. This reservation is in charge of the State Department of Conservation, and is one of a chain of state-forests now covering fifty thousand acres. The land acquired by the Commonwealth was owned largely by lumbermen and, had it not been bought, it would have been logged off in a few years. The logging would have been followed



THE MOHAWK TRAIL

Courtesy Mrs. B. F. Cushman

MRS. H. A. HICKS

car, we observe that other motorists have followed our example, but are content to rest their cameras safely on the top of the railing, evidently disinclined to risk a slide down the steep embankment and into the stream that runs at the bottom.

The supreme beauty that marks the scenery of the Mohawk Trail—a magnet that draws innumerable visitors from all parts of America and one of the greatest assets of the State of Massachusetts—has impelled the Commonwealth, by an act of the Legislature, to acquire thirty-six hundred acres of forested mountain-slopes on both sides of the Trail for the purpose of protecting the scenery against despoilment, vandalism and desecration. This reservation, known as the Mohawk Trail State Forest, extends from the railroad-crossing at the foot of

by fires, and the entire Cold River Gorge made a valley of blackened stubs and bare rocks, a place of desolation rather than a valley noted far and wide for its forest-beauty.

A few more windings and surprising vistas, and we arrive upon a sightly plateau. At the left, high up, we descry the spire of a little, white church, the members of whose widely scattered congregation dwell about this hilly region. Towards the right, we behold a beautiful prospect of mountainous scenery. We pass over the Hoosac Tunnel, which, according to a tablet, lies twelve hundred feet below us. We grudgingly proceed, until we reach Whitecomb Summit, the highest point on the Trail—nearly twenty-two hundred feet above sea-level. Even without ascending the lofty observatory which has been

erected here, we can appreciate the magnificent panorama displayed at this point. Towards the east, whence we came only an hour ago, stretches the Deerfield Valley; toward the northeast, fifty miles away, rises the peak of old Monadnock and, farther south, Wachusett rears its head. As we turn our eyes in the opposite direction, towards the south-west, the tops of the Catskills on the Hudson come into view, with the Green Mountains of Vermont in the background far to the right. In circling around the observatory, peopled with nature-lovers, we note that nearly every one carries a camera which he manipulates either on the spot or from some nearby point of vantage. Naturally, the photographs thus obtained will serve merely as mementos; they cannot yield adequately artistic results on account of the great distance of the objects that crowd the horizon. "Better no pictures at all than poor ones," say we to ourselves; hence our camera remains in its case for the present. It is well that it does so; for about two miles farther on the Trail we arrive at the top of the Hairpin Turn, whence we obtain an unobstructed view of the Greylock Range. We quickly decide to hazard an exposure. Leaving the car, we cross the main road (the Mohawk Trail) to the left and enter a foot-path which seems to lead to a lookout. Following this path down the mountain-side for several hundred feet, we halt. The fairest view of all now lies before us—the city of North Adams in the valley below, and, rising above it, a mountain-range culminating in Mt. Greylock, the highest peak in Massachusetts—over thirty-five hundred feet high. The bared sections of the mountain, visible from here, were caused by a landslide twenty years ago. Mt. Greylock is now a State reservation.

After enjoying the feast provided so generously by Mother Nature, we make our picture, return, enter the car and begin the descent, making mental reservations as to other photographs to be made on some future occasion. Far down, ahead of us, we observe the famous and somewhat dangerous Hairpin Turn—blasted out of the side of the rock—which, thanks to the experience and skill of our companion, the driver, we negotiate successfully. The view which greets us after we have rounded this corner, at the base of the mountain, is one of rare loveliness—a large, green meadow, wooded hills and the Greylock Range in the distance. We step out, ascend the bank at the immediate left and capture the picture. Passing through North Adams, keeping on the Mohawk Trail all the while, we note beyond the city-limits the site of Fort Massachusetts, which was one of four forts erected in 1745 for the defense of the frontiers

of the Massachusetts Bay Colony. A year later, it was attacked by an overwhelming force of Indians and French regulars and burned. The garrison, including a number of women and children, were taken as prisoners to Canada. Williamstown, with its celebrated college, situated in the very heart of the Berkshire Hills, and occupying the farthest northwest corner of the State of Massachusetts, close to the States of New York and Vermont, richly repays us for a visit to that locality.

Much as we enjoyed the trip over the Mohawk Trail, it was but the approach to our principal objective—the Berkshire Hills. An adequate description of this lovely and popular region would far exceed the space allotted to the writer; therefore, he will touch merely upon the highlights of this extensive picture. Before leaving Williamstown, we made a short excursion, a few miles across the border into Vermont, to Bennington of Revolutionary fame, where a force sent by General Burgoyne to capture important military supplies was defeated and captured by Continentals under Colonel Stark—an engagement which was followed shortly by Burgoyne's surrender at Saratoga.

The drive from Williamstown to Pittsfield, twenty-seven miles, was quite delightful—with the Berkshires rising high at the right, and within sight of Mt. Greylock for more than half of the way, through the attractive town of Adams with its fine monument of President McKinley, and interesting old Cheshire. Pittsfield abounds in scenic, historic and literary interest. Here are old homesteads—notable literary shrines—directly associated with Henry Wadsworth Longfellow and Oliver Wendell Holmes. Among the many excursions to be made from here, we had time to make but one—to the nearby, beautiful Lebanon Valley, over the Taconic range of mountains, quite near the New York State line.

Motoring south, in view of indescribably beautiful scenery, which includes the Housatonic River, several small lakes—of which Laurel Lake is like an exquisite pearl—and the Berkshires ablaze with the gorgeous colors of autumnal foliage, we arrive only too soon at Lenox. The town, which was named in honor of Charles Lenox, Duke of Richmond, cherishes the memory of Nathaniel Hawthorne, who here wrote some of his finest novels. Situated high on a broad and fertile plateau, and overlooking the hills and vales of Berkshire, Lenox is the pride and glory of its citizens, the mecca of thousands who sojourn here during the summer and autumn. Others than Hawthorne found here beauty and inspiration. For charming walks and drives with kaleidoscopic changes, at every turn, Lenox



FRYAR HOUSE

WILFRED A. FRENCH

is justly famous and without a peer in the high-land-region of western Massachusetts. It was tantalising for us to yield only a beggarly few hours to this veritable garden-spot. As to photography—that was to be thought of only at some future time when days and not hours should mark the duration of our stay.

The next day saw us bidding a reluctant adieu and *au revoir* to fair Lenox and, gliding slowly over the smooth State road, we found ourselves suddenly in enchanting Lee, named after General Charles Lee of Revolutionary fame. We passed at a snail-like pace through this paradise of terrestrial loveliness, on to Stockbridge, where we found ourselves in less time than is required for an indoor exposure on a dark day.

Aristocratic Stockbridge, with its numerous superb estates denoting refinement, wealth and artistic taste, has its associations of famous men, like other towns in the Berkshires. An æsthetic charm, too, is given to Stockbridge by its colony of painters and sculptors. Among the latter is Daniel Chester French, whose summer-home and studio we found to be situated in a restful and secluded spot, but commanding a fine view. The artist had but recently finished his great, seated figure of Abraham Lincoln which was destined to rest permanently in the Lincoln Memorial, at the National Capital. One of the scenic features of Stockbridge is the wonderfully beautiful lake known as Stockbridge Bowl. When

passing through Lee, earlier in the day, we had intended to digress and make the acquaintance of the noted "Jacob's Ladder" (State road); but our thoughts had been held captive by the charms that met our gaze. Consequently, we made the little excursion from Stockbridge, via East Lee. A favorite run from Boston to the Berkshire region, across the state, is via Springfield and "Jacob's Ladder," over the Taconic range of mountains. The delightful views beheld on the way seem to warrant this choice. The most spectacular part of this irregular, but well-kept highway extends as far as Chester. On the way, we crossed its highest elevation—twenty-three hundred feet. We were much displeased to see the many huge automobile bill-boards which disfigure the landscape along this beautiful State road, although no one could really disapprove the occasional, small signs, "Kodak as you go", displayed, modestly, in advance of inviting camera-themes. In any case, they tell the truth. Chester, where we lunched, we found to be a delightful, cosy, little village, and uniquely situated. From Chester we made our return trip directly to Stockbridge.

Another pang—and we were on our way to the place of several days' sojourn, Great Barrington. We arrived there in less than half an hour, traveling slowly. We were now approaching the southern terminus of the Berkshire Hills, though at no diminution in delightful scenery, but with

the appearance of long, refreshing meadows, and isolated masses of rock like Monument Mountain—made famous by William Cullen Bryant.

Comfortably established, temporarily, at "The Birches"—amidst tranquil, refined surroundings—we enjoyed the advantages of Great Barrington, from the tourist's viewpoint. The local show-place *par excellence* is the extensive and magnificent Hopkins-Searles estate, with its palatial Louis XIV mansion, surrounded by a high and massive stone-wall and towers, in marked contrast to the old, gambrel-roofed colonial home of the poet Bryant built in 1759. Our several excursions included one to the Catskills—about thirty miles away, via the Egremonts, Claverack (a unique, old Dutch town) and Hudson, and, on the way—Bashbish Falls, a cascaded waterfall of fascinating beauty. We had now begun to use our camera. Another outing was to nearby Monument Mountain, seen on our approach to Great Barrington a few days before. Another short excursion was to Mt. Everett, a State reservation. Berkshire Heights, easily accessible by automobile, rising almost abruptly behind our temporary domicile, is the highest elevation in the town and affords a magnificent panorama of distant mountains, valleys and fields. And so, after a three-day sojourn, we bade farewell to the Berkshires and wended our way homewards.

Directly back to Boston? No, indeed! At four o'clock in the afternoon we were gliding along the State highway, delighting in the picturesque views of the mountain group in the south-western corner of Massachusetts. Then we passed into Connecticut—viewing at our right lofty Bear Mountain tucked away in the extreme north-western corner of the Nutmeg State—and arrived, all too soon, at Lakeville. We found our host of the Farnum Tavern a pleasant and accomplished gentleman, and an admirable and willing pianist. At nine o'clock, on the following morning, we began what proved to be a journey filled with new and delightful experiences. We

had never imagined that Connecticut contained such attractive towns and hamlets and delightful scenery, as we passed through on the way to Hartford—East Canaan, Norfolk, Winsted, picturesque, high-cliffed Farmington River—and over lofty Avon Mountain with its sightly Heublein Tower. A respite at Hartford and then northward, along the Connecticut River, on the east bank, to Springfield, Massachusetts, just before reaching which we had an opportunity to admire famous Longmeadow.

After passing the night at Springfield, we passed through the prettier section of the Connecticut Valley, stopping to visit Holyoke, a throbbing manufacturing-town; nearby Mt. Tom and Mt. Holyoke; beautiful Northampton, the seat of Smith College; South Deerfield, of Bloody Brook Massacre fame; Deerfield, with quaint old Frary House and many other interesting, historic landmarks, through wonderfully fertile fields to Greenfield, where we arrived at two o'clock in the afternoon. While engaged in the somewhat perfunctory formality of eating dinner, at Greenfield, we confirmed the resolve, made a week ago, and not many miles away from here, that we revisit the Mohawk Trail, as far as the summit, before we returned to Boston; and so, at four o'clock, we were resting once more at the hospitable inn at Charlemont preparatory to carrying out our plan on the morrow.

It was the last of a series of perfect days with which we had been blessed. In advancing towards the handsome concrete bridge over the Deerfield River, we were again impressed with the exceptional brilliancy and harmonious blending of the rich autumnal foliage which glorified the approach to the Mohawk Trail and the passage over it. Rapid and variegated transformations of scenery kept us in ecstasies of delight, and we were glad to have begun and to have ended a tour which, in every conceivable respect and in our wide experience as travelers, in this country and abroad, we do not recall to have been rivaled.





Cutting up Roll-Film for Developing in a Film-Pack Tank

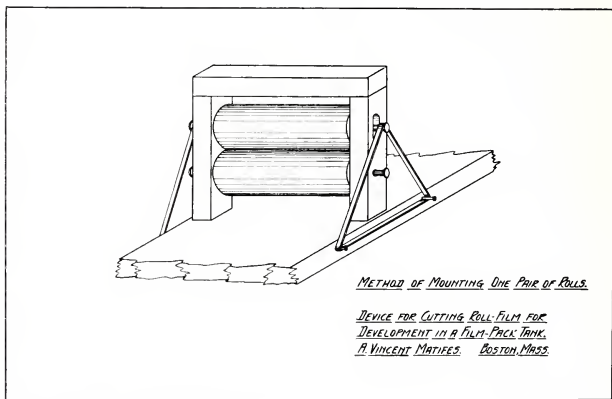
A. VINCENT MATIFES



ANY amateurs are having a great deal of trouble and are not getting satisfactory results in the developing of roll-film in a tank. Some have given up this method of developing and have resorted to the old way of developing by hand. Others who do their developing by hand but with the intention of doing

enough. The upper roll turns in a vertical slot and is held by a slight pressure against the lower roll. Small rubber bands, placed like a triangle from the spindle of the upper roll to nails on the side of the base, will supply sufficient pressure.

When using this device, it should be understood that all the following operations should be carried on in the darkroom until the cage con-



METHOD OF MOUNTING ROLLS

A. VINCENT MATIFES

it in a tank in the future have given up the latter method due to the fact that their camera friends have given them unsatisfactory reports of the results obtained by the roll-film tank.

The illustration shows a simple device which makes it possible to cut up roll-film for developing in a film-pack tank and it has been used very successfully by the writer for the past year in developing his own films.

It consists of six (6) pairs of wooden rolls about an inch longer than the width of the film. Each pair of rolls is fastened to a long board the same distance apart as the exposure-numbers on the paper backing of the film-roll and although the distance between these numbers varies a little, an average can be taken which will be close

taining films has been placed in the film-pack tank for development.

The film and paper backing should be wound on to an empty film spool from the original spool before inserting the film between the rolls, as one end of film is usually loose from paper backing and is apt to cause trouble unless this particular precaution is taken.

Place the roll of film on the base, then with one hand raise the upper roll and with other hand insert end of paper backing (with the exposure numbers facing upward) between the two end rolls, then drop the upper roll down. Repeat this inserting operation until film and paper backing has been inserted between the six (6) pairs of rolls, stopping when the exposure-numbers

2 to 6 inclusive are approximately in the center of the space between each pair of rolls. The film will not be scratched or wrinkled, but will be automatically smoothed out flat and held gently but firmly between rolls before and after cutting without injury to either side.

It is now ready for cutting up. Take a pair of scissors and cut film and paper backing on the center of each exposure-number.

After cutting is completed raise the upper roll and remove each film separately, throw away paper backing and place film in cage of film-pack tank. Repeat this operation until each film has been placed in cage, then proceed with development according to the formula.

The cost of a film-pack tank is from two or three dollars less than a roll-film tank, and any one can make this device at home by using an old broom-handle (finely sand-papered) for the rolls, odd pieces of wood for the roll-supports and base, nails for the spindles of rolls, and a few rubber bands. The base may be hinged in the center so that it can be folded up when not in use, thereby saving space.

The few extra minutes spent in the darkroom to cut film for development in the film-pack tank is more than paid for by the results obtained by that method. Then, again, you may enjoy the building of the machine as much as I did, although the first one required some planning.

Autochrome Plates and Color-Perception

DR. THIEM

[Part Two]

Continued from the July Number



THIS half-unconscious transformation fails as soon as we have no experience of the light falling on the object. So one is almost color-blind in the unaccustomed light of the mercury vapor-lamp, an example that frankly limps, because invisible rays here play a considerable rôle. Whoever has had occasion, however, to work in a room lighted with Geissler tubes—the so-called Moore light—will have noticed the uncertainty of judging color-values by it.

A well-known experiment in which the circumstances are carried to an extreme, is a conspicuous example of the facts described. A prismatic block with a piece of blue paper pasted on one side and a piece of brown on another is placed in a box in such a way that its edge where the two come together can be seen through a tube. If the brown paper is illuminated by daylight and the blue paper by candlelight, on looking at the two through the tube one will reach the conclusion that the blue paper looks just the same as the brown. The reason is that the brown paper reflects just as much of the excessive blue rays of the daylight as the blue paper does of the very scanty blue rays of the candle. If the prism is removed from the box the colors look the same in candlelight as in daylight—one side blue, the other brown. This experiment shows exactly the dependence of color-sensitiveness upon a knowledge of the light falling upon the object. If we are mistaken regarding the latter we lose the measure for our

judgment. The eye even is puzzled when it has to focus on two different-colored light-sources at the same time. It is as if a piece of music were set before us in which the ear has to follow two different keynotes. To be sure, a skilful musician can do that when the two keynotes are nearly related; if they are not, our understanding refuses and an ever so artistic intertwining of a motive in C sharp with one in B flat must turn out as cats' music. A similar effect takes place with the eye. In twilight it has the idea of focusing on two different white sensations, if the expression may be permitted, and it even answers with a sensation of pain.

The necessity of a knowledge of the circumstances of lighting teaches us to understand whence comes the difference between our vision and the reproduction of the color-plate.

We refer every pictorial representation, painting as well as color-photograph, to white daylight; in other words, we assume that we have real colors before us in case no other indication is to be seen as to what color the source of light is. Thus we are warned by the long shadows, the color of the sky, etc., that the sun is low, and hence we understand and expect a warm lighting; in a moonlight-landscape we decide by the depth of the shadows and the dark sky, as well as the strong contrasts, therefore without definition, that it is a moonlight-view, especially when the picture is in colors. If the picture, however, represents a subject in artificial lighting, perhaps it is sufficient in scientific views to give a

simple explanation such as: "Made by incandescent gaslight", but for all other pictures the source of light must be given unconditionally if the lighting is to be credible. By reason of the peculiarity of the eye above mentioned, to perceive the variation from white light far less than it actually is, an artist in a room lighted by candles would certainly be far from representing objects so red as the color-plate would depict them, and likewise an object lighted by an incandescent gaslight would not be painted so green as it really is, or, in other words, the moderating action of the eyes shifts all color-values, so that we must use a special color-filter for every individual source of light, because all values on the plate appear too strongly toned by the peculiar color of the light.

Heretofore, we have spoken only of those cases in which one lighting controls. This, however, is not the usual one, for in the action of the cloudless sky two very different complementary colored sources of light act together much more strongly. The white sunlight entering our atmosphere is split into the yellowish sun's rays and the deep blue of the sky, and only where the two arrive simultaneously is there white light.

If we now observe the circumstances from an interior—a very clear sky without clouds and the absence of surfaces reflecting sunlight—in general only one of the two sources is active. In rooms where the sun shines the blue sky is apparently shut out, but the rays strike the floor and their reflection actually lightens the rooms. There is therefore a strong yellowish, warm tone present in such rooms which is exaggerated in the plate, red being reproduced as vermillion—in short, everything has an orange-tinge. On the contrary, chambers with a northern exposure and a deep blue sky, only lighted by the latter, all objects appear bluish if we enter directly from a sunny southern room, as long as our eyes have not become adapted to the new source of light. In this case the autochrome plate will have an exaggerated bluish tinge, because in looking at the picture we do not take account of the blue lighting of the sky, but assume that the photograph was made by white light. Whereas, therefore, in making interior-views, only one of the two colored sources of light is active, in the open air the two are in conflict.

In misty weather, or if there are white clouds in the sky, or if sunlit surfaces reflect the light, the shadows are strongly illuminated by white light. If, on the other hand, only skylight in general falls on the shaded portions, they only receive blue light. Hence the color-plate will give a strongly bluish tinge in the purely shadow portions when the skylight is the illuminant.

In a sunlit landscape there are deep shadows which are a stumbling-block for the color-plate, because the shadows are underlighted while the highlights are overexposed. We know that sensitiveness depends upon the absolute strength of the light and therefore the instructions are to expose in clear sunlight about forty times and by weak light about eighty times as long as with a common plate of average sensitiveness. The difficulty is further increased by the blue light, because the autochrome reproduces the shadows in an exaggerated blue-violet tone while to the eye they look gray. Of course, we here refer to shadows in the foreground only, for with distant objects, such as the shadow of mountains, etc., the vapor in the atmosphere intervenes and changes the appearance.

That we see the shadows as gray and not blue is to be attributed to the fact that our eyes are focused on the brighter sunlight and cannot adapt themselves instantly to the blue. We know that the dusty highway or the wall of a house lying in the shadow is gray or white and not blue; we know that we are in white light and therefore only see the blue of the shadows when there is a rift in the working together of the various light-sources. In the late afternoon-hours the sunlight is always warmer, the contrast to the blue sky-light always greater. An otherwise almost colorless snow-landscape receives from it a strong entity, because every little unevenness becomes on one side of a warm gold-color while on the other it is a cold blue, and the picture is therefore specially pleasing, because through the long shadows caused by the warm coloring of the low-lying sun, and the steel-blue sky, which is at the same time visible in the picture, the blue of the shadows is necessarily reproduced. Blue shadows are therefore by no means to be rejected as unreal—they need only have a sufficient motive.

As a result of the preceding deductions, it may be stated, first, that there is an important difference between the vision of the eye and the reproduction of the color-plate, necessitating our seeking means of obtaining an effect true to nature in spite of that. To do so it is necessary to use special filters for special lightings, which will in a measure transform the reproduction to that of white daylight or take account of the modifying efforts of the eye, for our desire is to depict nature not as it really is but as it appears to us. It should be recalled here that an instantaneous photograph undoubtedly gives a correct image of a man in movement, and that nevertheless unpleasing phases of the step can never be satisfactory. I would add that my deductions are naturally drawn from my personal taste. Of course, for a series of pictures the task con-

sists in giving a document of the external appearance, and in the extremely changeable daylight this is not reproducible; but in this case one can use only a light of constant color with a filter exactly calculated to produce a neutral gray—for this a flashlight is most suitable—and properly such pictures should be viewed by a corresponding light. In all other photographs, however, good taste must have a voice, and as pictures only possess a value when they exercise a degree of charm and therefore are considered artistic, the wish arises to so influence the color by the filter that the photograph will appear just as an artist would depict the subject. In other words, the object appears to me to be, not to reproduce nature as it really is, but as we wish to see it represented. This mastery over the colors is given us by the possession and intelligent use of a few special filters of varying grades, all more or less penetrable by the blue.

The question arises whether the Lumière or the Hübner normal filter is entirely satisfactory for white daylight. It is so constructed as to reproduce a gray scale by white daylight as a pure gray. It gives good landscape-views, in which, to be sure, a cold tone predominates, because everything is overlaid by a weak violet that in deep shadows acts untruthfully,—more so than pure blue. This blue-violet covers all the other colors, depriving them of brilliancy. Even prints made after these can be recognized at once as autochromes by the blue tone.

We know that all colors seen through yellow glass look fuller and this makes the individual colors stand out more clearly and the picture becomes brighter, regarding which I need only recall the clarifying effect of a contrast filter in black photography. At the same time, it is to be considered that even the thinnest yellow filter in the market is strong enough to give the impression of a complete yellow coloring. But if very weak yellow glasses are placed together it finally occurs that the effect of increasing the color and clearness is attained without the white surfaces appearing yellow. I succeeded in finding a filter that absorbed so much more blue-violet than the normal filter, that the shadows look gray and not blue, besides increasing the color and working surprisingly clear. I use this exclusively as a normal daylight-filter in sunshine and overcast sky. (It is carried by the Lifa Lichtfilter Gesellschaft of Augsburg, Germany, as Filter 8 a 2.) In dull and rainy weather Filter No. 8a, which passes still less blue, is recommended; in unfavorable circumstances it still gives strong colors without blue shadows, while similar views with the Lumière normal filter must be avoided, as they completely swim in a false blue-violet. Of

course it is a matter of experience to select the right filter for the occasion, otherwise miscolored pictures may result, as, for instance, when working with the 8a filter in good white light. Filter 8 a 2 and 8a are also to be used for interior-pictures in rooms with a northern exposure, according to the clearness of the sky. With heavy clouds only 8a can be employed.

In sunlit interiors we have on the other hand to take into account that the plate shows too much yellow, and, therefore, a filter must be used that allows more blue to pass. Casually the normal filter for the Dufay plate is exactly right for such exposures, since it is very sensitive for green-blue and red tones, and reproduces faultlessly pictures hanging on the walls. It is carried by Lifa as "Dufay Filter."

It still remains to be mentioned that naturally cases in which there are two motives, in which by reason of entirely different lightings two different filters must be used, cannot be reproduced simultaneously with success. If, for example, from a north-lying room we take a glance into a sunlit south chamber, we will come to the conclusion that such an exposure had better be let alone, filter or no filter.

In conclusion, it may be added that it must always be known that black photography works with lights and shadows and Autochromes with colors. Hence he who in black photography, in subjects whose charm lies in the color, can not bring together in a skilful manner the contrasts of light and shadow, will be disappointed in the reproduction. In color-photography, on the contrary, the shadows must be almost entirely lacking and deep shadows are in all cases to be avoided. Hence in the selection of a motive one is forced to learn what is specially suitable for the portrait. The human skin shows an extraordinarily fine gradation of color-tones and we notice these in the first place. Unfortunately they cannot be reproduced in black and white. We are therefore obliged to place the head for photographing in such a light that it shall produce expressively, by light and shadow, a conception that perhaps only in sharp-featured faces covers with the expression that the eye takes in. From this difference arises the strangeness which undoubtedly true likenesses often have for our eye. In color-photography on the other hand we can avoid introducing shadows artistically into the subject and can generally work up in Autochromes much better likenesses than in white-and-black photographs.—*Photographische Rundschau.*

[The first part of this article appeared in the July issue. Those who are interested in Autochrome plates should keep this article on file for future reference.—EDITOR.]





EDITORIAL



Selling Pictorial Enlargements

THERE are many workers who are desirous to derive an income from the sale of enlargements of some of their fine pictorial negatives, but who either lack the proper facilities or do not know how to proceed in the matter. Of course, the usual way is to place them on exhibition in an art-gallery, and instruct the attendant as to price and other information. Another method is to interest some photo-dealer, provided that he is not restricted to the handling of prints by another photographer. A series of articles on the subject of selling photographic prints, by F. C. Davis, and published in PHOTO-ERA MAGAZINE commencing in December, 1921, describes every practical and desirable method of selling photographic prints. But there is one method that we believe has not come to the attention of Mr. Davis, for the probable reason that it lacks the obviously commercial character of the many excellent means he has pointed out.

The method to which we refer is at once original and dignified, practical and inconspicuous as well as profitable. We had occasion to visit a high-class local office-furniture store, not long ago. Handsome flat and roll-top desks, cabinets, book-cases, tables and chairs, in the dark, rich colors of mahogany, cherry and oak, were displayed effectively in the spacious, high-walled establishment. The walls were adorned with superb, large-sized bromide enlargements of attractive subjects, mostly views of our National parks, although there were several subjects of local architectural interest. The pictures were in frames of four-inch mouldings and constituted an artistic foil to the stern lines of the furniture. Asked if the pictures were for sale, too, the salesman answered in the affirmative, explaining that the price depended on the size—from \$35 to \$50 each, including the frame, the largest print measuring thirty by forty inches. We figured mentally that these prices were not exorbitant in view of the high artistic quality of the pictures, although the actual cost to the photographer could not have exceeded fifty per cent. for each framed enlargement. We were told confidentially that the photographer—a local professional landscape specialist—supplied these enlargements (which he prepared himself) already framed, and as soon as one was sold it was at

once replaced from a supply carried on the premises. The privilege to display and sell pictures in this way was reserved for this particular photographer and, inasmuch as their presence on the walls was a great attraction—many people coming specially to see them and frequently making important purchases of office-furniture—the firm charged the photographer only a small commission on the sales of his pictures.

Now what can be done by one photographer in an establishment of this kind can be done by another, but preferably in another city—unless the first photographer had the foresight and enterprise to extend his business-system to other cities. So far as the method itself is concerned, it need not be confined to stores devoted exclusively to office-furniture. Places devoted to other lines of business, and where large framed photographs could be advantageously displayed, will suggest themselves to the pictorial photographer commercially inclined.

What Is a Snapshot?

A THOUGHTLESS public will always pick up a new word or phrase and apply it ignorantly, thus causing confusion in the minds of serious thinkers and accurate writers. "Tintype", "cinema", "daguerrotype" (daguerreotype), "just a minute", and many others are examples of this careless habit. Now, the popular term, "snapshot", has been added to the list, and whether the length of the exposure was a fraction of a second, or several seconds or minutes, it seems to make no difference in the application of this new and legitimate photographic word. The Editor heard a well-known painter tell a professional photographer, recently, "just make a snapshot of my painting, and send me a couple of prints." Careless writers of fiction also abuse the word "snapshot", in referring to a photographic exposure which lasts several minutes; whereas they probably mean the click of the shutter when it opens and when it closes. With the aid of the American photographic press, the loose and incorrect term, "moving pictures", has been nearly eradicated from the daily press. Discriminating photographers and careful photographic writers take pride in their photographic terminology and object to its misuse.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition
Wolfeboro, New Hampshire, U.S.A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$3.00.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced. Prints on rough or linen-finish surface and sepias are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail. All prints should be mounted on stiff boards.

3. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. **Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins; but in every case, prints should be protected by strong, stiff boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Bridges

Closed May 31, 1922

First Prize: Wm. B. Imlach.

Second Prize: Warren R. Laity.

Third Prize: William S. Davis.

Honorable Mention: Walter P. Bruning, Wilson D. Carey, Cornelia Clarke, A. Clousen, Martha Curry, A. D. DuBois, Emmett K. Emslie, Miss G. Finnie, Wm. H. Finch, Chas. T. Graves, Ross R. Gill, A. R. Hazard, Jos. B. Herriek, A. R. Hutten, J. Thornton Johnston, Dr. K. Koike, Chas. Lederle, Edwin Loker, Dan McCowan, Alexander Murray, Walter Rutherford, G. L. Rohdenburg, Charles Ruddi, Eleanor S. Smith, Edgar S. Smith, Harold L. Snow, W. Stelcik, James G. Tannahill, Carl Hillman von Nordheim, A. J. Voorhees.

Subjects for Competition—1922

"Winter-Sports." Closes January 31.

"Home-Portraits." Closes February 28.

"Child-Studies." Closes March 31.

"Still-Life." Closes April 30.

"Bridges." Closes May 31.

"Marines." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Summer-Sports." Closes August 31.

"Parks." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Should Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, are inclined to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know?



EAST RIVER

WM. B. IMLACH

FIRST PRIZE — BRIDGES

Poor Negatives

ONE of the differences in working which distinguish the old hand from the novice is in the care taken to protect the lens during exposure from light which is not required to form the image. It is this stray light which is the cause of dull, flat negatives, and of much misunderstanding of the exposure. Many of the text-books tell us that an overexposed negative is one in which, when it is placed in the developer, the image appears quickly, the whole surface darkens over, and the result is dark, but lacking in contrast. Such a description is true enough of an overexposed plate or film; but, unfortunately, for any indication it may be expected to give, it is equally true of a correctly exposed and of an underexposed negative, if there has been much stray light in the camera, as there very often is.

After all, is not such stray light to be expected? Let us think of the camera as a room. "camera" means "chamber", of the lens as the window of that room, and of ourselves as standing where the plate or film is placed and looking out through that window at the picture beyond, which is to be photographed. Suppose that at a little distance in front of the lens or window a perfectly dull, black opaque screen were to be set up, hiding every part of the view that could be seen directly through the window; such a screen would make the inside of the camera very dark, but it would not make it absolutely dark.

No one with the slightest knowledge of photography would think of changing plates in such a room; he would want the screen brought right close up to the window and carefully fitted all round. Yet it is obvious

that this scattered light, which we should regard as capable of spoiling a plate in a moment, must be present in the camera when the screen which we have imagined to be interposed between the subject and the lens is removed, and the exposure is in progress. It is present, and it is affecting the plate or film, either giving it so bad a general fogging as to make the result a complete failure, or, if it is not as bad as this, it is at least likely to dull over the negative, causing it to be less good than it should be.

It is the knowledge of this which makes the old hand cautious. When he is working out of doors he uses a sky-shade whenever the opportunity offers; and in indoor work a screen of some kind is always interposed between the window and the front of the lens, unless, of course, the window is itself included in the picture. Those who have not worked in this way cannot realise what a difference can often be made by screening the lens, especially when it embraces a wide angle, and has its hood reduced to the smallest proportions. — H. M. PRAED in *The Amateur Photographer*.

Diapositives For Projecting

IN making diapositives for projecting, white and black have been the rule in spite of the fact that there are plenty of methods which will give a large variety of pleasing tones that are at the same time durable. Not to mention the pigment-process and pinatype, which give us virtually all colors, and certainly beautiful results by comparatively simple methods, we have the after-toning of our ordinary white-and-black dia-

positives. The latter is the most convenient method to produce pictures for projecting, and the less sensitive kinds permit development by clear red light or even by yellow light, which makes the handling of the plates easier and the entire work much pleasanter.

With regard to the after-toning of these plates, it presents no special difficulty, and yet the beginner is apt to meet with faulty and irregular coloring. The cause of this is partly because the diapositives lack normal qualities of depth, gradation and clearness; or, perhaps, because the toning has been handled carelessly. Some of the methods, too, are rather uncertain, like those toned with uranium or iron-blue, and leave much to be desired as to general durability and sensitiveness to light. These should be avoided at first.

sufficient resistance to the strong light of the projecting-lantern.

Really good, durable sepia and olive-tones can, at all events, be obtained with different developers by simply reducing or entirely omitting the sodium sulphite from the normal formula. The following, for example, works well: 2 per cent. solution of pyrogallie acid, 50 cm.; 10 per cent. solution of potassium bromide. 8 drops. With this developer some diapositive plates give with normal exposure, first a warm sepia which, on washing the plate, changes to an olive-green. The gelatine also takes a strong yellow color which disappears after thorough washing.

If to the above developer is added 4 grammes of crystallised sodium sulphite, the diapositive takes a



BRUGES

SECOND PRIZE — BRIDGES

WARREN R. LAITY

Very satisfactory tones, though limited in selection—bluish black, sepia, warm brown, etc.—may also be obtained without after-treatment, by varying the time of exposure and making up the developer somewhat differently from the normal proportions. In this way we can obtain really uniform and durable colors. Of course it requires some practice to be able to obtain with certainty the desired shade. Besides, the kind of emulsion used on the plates plays an important part, as they vary greatly in the different makes. With a coating rich in silver-chloride, for instance, it is easier to get warm sepia-tones than with one that contains more bromide.

An attempt has also been made to prepare special plates for brown, red, blue and lilac shades that, when developed with a special developer, will produce all these colors. These plates, however, have not yet appeared on the market. The reason for this probably is that they, at least partly, do not possess

cold-sepia tone which changes to dark olive on washing. If 8 grammes are added, the final tone becomes a dark sepia. With 16 grammes it becomes almost pure black. It will thus be seen that a comparatively small difference in the quantity of sulphite changes the tone considerably. One, therefore, needs to be exact in order to obtain uniform results.

Photographische Rundschau.

Unusual F/-Numbers

THERE seem to be a good many lenses on the market now, presumably of German origin, which have their diaphragms marked with F/-numbers which are not commonly met with, remarks *The Amateur Photographer*. The ordinary practice is to mark the largest aperture at which the lens will work with its proper F/-number, whatever that may happen to be; and then to mark the scale with F/8, F/11, F/16, and so on, in the rec-



THE BUILDING OF THE BRIDGE

WILLIAM S. DAVIS

THIRD PRIZE — BRIDGES

ognised succession. Each of these numbers, as every photographer knows, indicates an aperture that requires twice the exposure that the next size larger required. In this way, the only irregular difference in exposure will be that between F 8 and the largest aperture of all—F 6, F 6.5, F 6.8, F 7, or whatever it may happen to be. These German lenses, however, do not follow this practice; but for some unexplained reason are numbered F 9, F 13, F 18, etc., or with some similar series. The result is that the user finds that the graduations on the iris do not correspond to any of the F -numbers given on exposure-meters or in exposure-tables; very often he does not recognise these figures as referring to F -numbers at all. The calculation of exposure is thus made more difficult for the novice. The rule for his guidance is that exposures are proportional to the squares of the F -numbers; and the easiest way out for him is to square each of the numbers on the iris, to square the usual F -numbers, and then to make a little table showing that F 18, for instance, requires approximately $1\frac{1}{4}$ -times the exposure that would be correct for F 16, and so on. But the method introduces a complication which the beginner, at any rate, would do well to avoid, by choosing one of the many excellent lenses which are graduated in the accepted way.

A Simple View-Finder for Large Cameras

Not only on small cameras but on large sizes, it is often found desirable to use a view-finder up to immediately before exposing, when the groundglass is for some time useless; but it is still desirable to assure oneself that the contours of the image come within

the limits required or to observe once more the objects to be photographed. Of course, such view-finders can be made for cameras of all sizes up to and including those as large as 8 x 10 inches.

A cotemporary reminds its readers of its previous advice regarding a specially simple and practical view-finder for cameras up to the size mentioned, that can be made by oneself. Such an instrument, costing almost nothing and rendering as good if not better service than an expensive attachment, consists of a cardboard or wooden tube covered with cloth and as long as the full bellows-length of the camera. To the front end of this tube is closely fitted a common lens—such as of an opera-glass—which should have exactly half the focal distance of the lens of the camera. About the middle of the tube a groundglass is fixed with the unground side toward the lens to avoid reflections. The dimensions of the groundglass must be one-half those of the camera-glass. For example, if the camera is 5 x 7 the groundglass in the tube must be $3\frac{1}{2}$ x 5 ins. Much stopping-down of the finder-lens is not necessary to get a sharp focus, and it would spoil the clearness of the image, which is the chief point. It should be stopped only enough to show all the parts clearly, even if not sharply. This view-finder can be attached either above or below the camera, and will sometimes be found of service on dull days. The back part of the tube acts as a light-screen and helps to give a better view of the image on the groundglass. Of course, such an arrangement can give only the correct limits of the picture as shown with the full focus of the camera for which the attachment is made, so that views made with a different focal length on the same camera would require a separate tube to correspond with the different focal length.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



IN THE PUBLIC GARDEN, BOSTON

PHIL M. RILEY

EXAMPLE OF INTERPRETATION

Advanced Competition—Parks Closes September 30, 1922

From the increase in the number of pictures sent in from all parts of the United States and Canada, we are led to believe that the subjects that we have selected for the last few competitions have been especially attractive to our readers. With the desire to maintain this interest and to encourage the many new friends, we offer this month a competition devoted to the pictorial presentation of parks. Now, according to the Century dictionary, there are a number of kinds of parks and all have their rightful place. However, in the present case we are going to limit our consideration of the subject to the following definition: "Park—a piece of ground, usually of considerable extent, set apart and maintained for public use, and laid out in such a way as to afford pleasure to the eye as well as opportunity for open-air recreation; as Central Park in New York or Hyde Park in London." We suggest that those who contemplate entering prints to be sure to get this definition clearly in mind. We regret to say that, sometimes, an otherwise excellent picture is rejected by the jury because its maker failed to understand the purpose and requirements of the competition for which it was intended. Therefore, let each contributor read the definition well, that there may be no misunderstanding.

Obviously, because the definition refers to Central Park and to Hyde Park is no reason that pictures of other parks will not be fully as acceptable to the jury.

In virtually every city or town of this country and others there is a park of some sort. Naturally, the size and beauty of such a park will vary according to the wealth and importance of the community which it adorns. But the point I wish to emphasise is that we draw no distinction between a picture of Central Park, New York City and one of Smith's Park, Smithville, provided that the maker meets the requirements and has made a *picture of a park*. Some of our smaller cities and towns are well known for the beauty and attractiveness of their parks. Often, too, history plays its part to add interest to these public centers of recreation. Although it may be stretching a point to call the common at Lexington, Massachusetts, a park, yet, it will help to make clear that, without the historic associations that are so well known, Lexington Common would lose much of its appeal. Boston Common might be cited as well; but we should be careful to avoid leaning too heavily on historic associations. A spot might be sacred ground historically and have no pictorial appeal at all. What I hope to make clear is that a beautiful park is the first objective; but if to its beauty is added the thrill of stirring events that happened on that very spot, long years ago, the camerist is fortunate and should make the most of his opportunity.

Perhaps, some of my readers who live in small towns will say, "That is all very well; but in my town all we have is a little square in front of the townhall. To be sure, we take pride in it because it is well laid out and well kept; but it is not a park. But this is where we have our public gatherings and band-concerts, and

where comfortable benches afford rest in the open air. We take pride in the fountain and in the beautiful flowers; it is all that we have in the way of a park, out here." In such a case, I am very sure that the jury will not be over-critical provided that the print itself is well done and includes sufficient evidence that it was made of the only available public ground or park in the vicinity. To all intents and purposes, it is a park, and small because the community is small. To insist that all pictures should be of city-parks would not be fair, nor very encouraging to the many readers who do not live in our large cities. Of course, those who have access to the large city-parks may have more subject-material; but, perhaps, the small-town worker may win the prize, nevertheless. It will be interesting to await the jury's verdict.

At this point, the worker may wonder what to photograph in a park. Of course, he cannot hope to make a picture of the entire park, especially, if it be a large one. Even if he could, I doubt that he could compose it to advantage. It would be too much to crowd into the picture-space. Therefore, in most cases the camerist will be obliged to seek out the commanding features of the park and confine his efforts to these alone. In Central Park, New York City, the subject-material is so varied that it becomes a problem what to photograph. There are statues, fountains, ponds, brooks, rocks, flowers, playgrounds, zoological gardens, museums, the Egyptian obelisk and certain secluded paths that might well be one hundred miles from New York. Then arises the question as to what is the real purpose of the picture to be made. Is it to record the park, as does a "picture" postcard? Is it to feature the statuary, fountains, museums and other artistic or architectural attractions? Or is it to draw attention to the ponds, brooks, rocks, flowers and beautiful trees? It seems to me that the problem is solved best by making the individual worker answer the question, "What, to me, is the most striking or the most beautiful feature in Central Park that I can portray convincingly with my camera?" Whatever the reply may be, let him make the picture which, to him, represents the subject best that he admires most in Central Park and let him rest content with that.

From the point of view of the Editors and the jury, it will be very interesting to follow the work that is submitted by our friends, old and new. Some will be more impressed by the artificial beauties of a park and others will try to feature its natural attractions. It will depend upon the individual camerist and his artistic and intellectual training, as to whether or not he admires statues and fountains more than he does flowers, winding paths and beautiful trees. In any event, his is the privilege to express his own individuality and the jury will respect that right. After all, one of the greatest attractions of photography is that it enables the worker to express himself, and in his own way. It would be a mistake to insist that he do this and so, or else be excluded. In some quarters, there is a tendency to set down definite rules and lines of procedure which must be followed by the camerist, otherwise he is likely to be "in wrong" with a certain school or coterie. Were I to have my house photographed by five pictorial workers, I should take them first all around the house and tell them what I thought should be emphasized or subdued. That done, I should let them alone and permit each one to work out the details according to his own artistic and technical equipment. From the finished prints, I should select those that met my personal requirements, irrespective of which one of the five workers made the pictures or of the equipment and methods he used. I should consider it an affront

to these workers were I to follow them about and insist that they use this or that lens, plate or camera. By so doing, I would curb any expression of individuality on their part and they would be no more than willing assistants to serve my own ends. Hence, in this competition we are considering parks, and it is parks that should be photographed; but as to what to photograph in a park, or what mood of the park to interpret, that is for the worker to decide.

Perhaps the reader may ask, "What about the camera, lens and plate to use?" As I have said before, it is virtually of little assistance, these days, to suggest the type of photographic equipment for any particular subject. If I advised a view-camera, some worker would produce a prize-winning print with a vest-pocket kodak, and thus prove convincingly that I was all wrong. If I should suggest the use of a ray-filter, another worker would send in a beautiful picture filled with tonal values and add that he did *not* employ a ray-filter. Consequently, the rôle of adviser is a precarious one in these modern days of superlative photographic equipments that appear to accomplish the impossible.

It might be well for the camerist who is planning to send a picture to this competition to become well acquainted with the park that he wishes to photograph. Even though he may be familiar with it, it will repay him to study the possibilities and to eliminate the subject-material that does not, to his way of thinking, feature the park as he believes it should be featured. Many of us have lived for years near some park and have passed through it daily without really appreciating its beauty, until a picture of it in a newspaper suddenly woke us up to the fact. Often, the subjects close at hand are longest neglected. For this reason, I suggest that a closer acquaintance with the park to be photographed, and its aspect under different lightings and weather-conditions, will be of value; for thematic originality is a valuable asset to a picture. In this connection, I might add that a number of pictures should be made, if there is any doubt, and from these should be selected the one that portrays the park as the camerist wishes it to be portrayed—after careful observation or according to a personal caprice. Of course, if the worker has his mind all made up and can go right to the subject, he has the advantage over the other who must make up his mind. In any event, the camerist who wishes to enter a picture should not "just run over to the park," make a hurried snapshot, enlarge it and send it in. In this competition, we hope to encourage all to go slowly and thoughtfully, to the end that all may be really benefited and encouraged to do their very best work. When one comes right down to it, there is much more pleasure in trying to do things well. In the end, there is something to be proud of and something to cherish.

There are many beautiful parks in the United States, Canada, and abroad; and, as we have readers in all parts of the world, we are confident that this competition will make a strong appeal. In fact, when its subject was suggested to some of our readers, there was an immediate show of interest and the request that the next competition be devoted to a pictorial consideration of parks, great and small. We wish to make every competition attractive, instructive and helpful. We are always glad to receive suggestions and to work together to make photography better known and of greater practical and recreational value. The number of entries are on the increase and the enthusiasm is greater than ever. Let this competition be another link in the chain that leads to photographic success.

A. H. B.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition
Wolfeboro, New Hampshire, U.S.A.



Prizes

First Prize: Value, \$2.50.
Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Subject for each contest is "**Miscellaneous**"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. Or, in case of dual authorship, names of both should be given. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface paper and sepias are not suitable for reproduction, and should be accompanied by smooth prints that have the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* **Criticism at request.**

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for 2-cent stamp.* **Be sure to state on the back of every print for what contest it is intended.**

8. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins, but in every case, prints should be protected by strong, **stiff** boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

Awards—Beginners' Competition Closed May 31, 1922

First Prize: Franklin Chapman.
Second Prize: Bernard M. Stern

Honorable Mention: J. J. Griffiths, Philip Mehler.



Get Down to Photographic Facts

A NUMBER of times, in these pages, I have expressed the opinion that modern amateur-photography was becoming too simple for the good of the technical knowledge of the beginner. Obviously, I do not deplore the unquestioned advantages of simplified photography, nor the fact that the popularity of the camera is directly due to the elimination of virtually all the bother in developing and printing, and the manipulation of photographic apparatus. But human nature is, at best, a problem. Whatever may be obtained easily, or with little effort, is never valued so highly as the objective that required hours and days of hard work to attain. Hence, with modern photography so simplified, the average camerist is not likely to add appreciably to his stock of technical photographic knowledge unless he happens to "want to know."

Let us take for example the well-known MQ tube. The directions state the amount of water to be added to prepare the developer for plates, films and bromide papers. Bromide has been added already by the maker of the MQ tube. There is nothing to be done except to add the correct amount of water. In fact, there is no more to it than to prepare a cup of bouillon, tea or canned soup. "Add water and serve" is applicable to much of modern photo-finishing. But why do you add, let us say, eight ounces of water for developing-papers and twelve for plates and films? Why not the same quantity for each? Ask the average amateur this question and note how often he will answer you correctly! Again, let us consider the acid fixing-bath. Why is it acid, and what makes it so? Why does not hypo alone suffice? Suppose that more or less water were added; what effect would it have on plates, films or prints? Once more, why should a red light be required to develop a plate or film, when an orange light is sufficient for printing? Those who can answer these questions will smile at their elementary character; but there are many amateurs who make good pictures, and do their own photo-finishing, who cannot answer such questions. Why not? Because there has been nothing in their picture-making that demands that they get down to fundamentals and know why they do this and so. Human nature steps in and asks, "Why take the time to find out when you are getting good results as it is? Let well enough alone". Perhaps, the reader may say that this is overdrawn; but I know whereof I speak from personal investigation in a number of cases which I selected as representative of the average vacation-camerist. Last month, I called attention to the real amateur-photographer and the difference between him and the host of snapshooters.



WILLOWS

FRANKLIN CHAPMAN

FIRST PRIZE — BEGINNERS' COMPETITION

The former knows why and wherefore, the latter follow directions blindly and seek no further photographic light. One of the chief attractions of photography is its repeated demand to obtain new and better effects by mastering new and better methods and apparatus. There is always something better ahead.

The use and abuse of exposure-meters by the snapshooters would be amusing, if it were not so detrimental to their photographic success. For some unaccountable reason, the average beginner or snapshooter purchases an exposure-meter and then settles down comfortably with the idea that his exposure-problems are ended. In most such cases, they have just begun. To my best knowledge and belief, there is not an exposure-device on the market to-day that will do its own thinking. Unless it receives some intelligent co-operation from its owner, no exposure-meter will serve effectively. I know of no manufacturer who claims that his exposure-device will tell the correct exposure without careful thought on the part of the camerist. And yet, I have heard the leading exposure-devices condemned because "they don't give the correct exposure at a glance". If the beginner or snapshooter would give the matter sufficient thought, he would realise that he is more often to blame than the exposure-meter. If he decides that the subject is a "distant view", when it is really a "near view", what is the poor exposure-meter going to do but give him the exposure for a "near view". Whereupon, the negative turns out to be over- or under-exposed and the exposure-meter is pronounced, "no good". Much of this could be avoided by the determination of the beginner to get down to photographic facts and not take so much on faith or printed directions. There is not an exposure-device on the market to-day that will not be of great help to any camerist who will use it intelligently.

The matter of the correct use of ray-filters is one that appears to be "a problem". Many snapshooters wonder why yellow was selected in preference to blue,

green or violet. What relation yellow has to green trees, clouds and distant mountains is a closed book to no small number of amateur-photographers. They buy a three-time ray-filter, give the required exposure and obtain a good picture; but why? They know that the ray-filter helps them to make a better picture than they would obtain without it; but ask them a few elementary questions with regard to orthochromatic values and they are at a loss for a reply. Really, when the manufacturers go to so much trouble and expense to print valuable and eminently practical booklets of information on every photographic product, it does seem that the camera-user should not be so unenlightened as he appears to be in many cases. Moreover, the booklets referred to are prepared especially for the beginner who wishes all possible information in connection with the plate, film or paper that he is using—or is trying to use with success. Virtually, every plate-manufacturer and many lens-makers issue helpful booklets on the correct use of ray-filters and most of these booklets may be obtained free of charge. There is no reason, whatever, that any intelligent camerist should not obtain excellent results with a ray-filter, provided that he will spend sufficient time to understand just what he is trying to do and how the ray-filter will help him to do it.

There are a number of other illustrations that might be mentioned to make clear the point that I wish to make. Let us rejoice that photography is so simple that thousands may enjoy its pleasures, rather than the few. Nevertheless, let us not ignore the strength that lies in the accurate knowledge of fundamental principles. No matter how simplified a method or process may be, let us find out all that we can about it. Let us know why we do things. Really, it is not work but play for the camerist who is ambitious. What did he buy a camera for, if he did not wish to make *good* pictures? To make good pictures consistently and with increasing pleasure, let him get down to photographic facts!

A. H. B.



DOWN THE SHADOWY PATH

B. M. STERN

SECOND PRIZE—BEGINNERS' COMPETITION

What's *Your* Hobby?

THE only one who is not interested in photography is the person who is not apt to be much interested in anything else.

A man buys golf-sticks because he has been bitten by the "golf bug," or because he has a torpid liver! Another buys a gun or fishing-tackle because he loves to get away from the crowd and back to Nature. A man or woman buys a baby-carriage because it becomes a necessary part of the family-equipment—and then they talk and think baby-talk just because they can't help it.

People buy automobiles and talk their heads off about automobiles, just because for them the automobile is the all-absorbing topic of interest. On all these things and a score of others there are fans, fans, fans! But you don't often see a photographic fan. You think you do, but you don't really.

You are saying to yourself, "But I do. Smithsonian talked an arm off me showing the pictures of his Canadian fishing-trip." But it was the fishing-trip that started Smithsonian's interest, and he liked the pictures only because they were pictures of the *fishing-trip*, and *fishing* was his *hobby*.

And the pictures Brownlee showed you were mostly of his children. White's pictures are mostly made on his motoring trips—and Miss Sweet was enthusiastic over her Atlantic City trip and showed you the pictures

she made and you really were more interested in Miss Sweet than you were in the pictures!

Nearly everybody that owns an auto belongs to an auto club—not one camerist in a thousand belongs to a photographic club. As a hobby in and of itself, photography has only a limited field, but as a delightful and unobtrusive *ally* of every possible hobby, or sport, its field is limitless.

People's *jads* (the things they are interested in) have made the Kodak business. Most of them don't care a rap for photography except that it helps them get more fun out of the things they *do* care for. It may be a Leghorn hen with one man or a steam yacht or motor boat with another, *but they both want pictures!*

HENRY J. WIEGENER.



A Rare Bird

GREAT PICTURE-BUYER (to hostess): "What do you think of an artist who painted cobwebs on the ceiling so truthfully, that the servant wore herself into an attack of nervous prostration trying to sweep them down?"

Hostess (a woman of experience): "There may have been such an artist, but there never was such a servant."
London Tid-Bits.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Toning With Salts of Tin

THE use of tin-salts to tone photographic silver-prints was, perhaps, first recommended by Neuschwender, especially for developed silver-bromide prints. The method worked out by him, which experience has shown to be the best, seems to be scarcely known to the professional world. With the beginning of the World-War it fell into oblivion; but has been brought again recently to the attention of photographers in the German technical magazines.

Aside from its practical value, toning with tin-salts possesses a high theoretical interest. Contrary to all other toning-processes in which the silver of the prints is either replaced by some other substance or is transformed into another chemical combination, we have here, perhaps, the only case in which a decided absorption-combination of the colloid silver is employed as a toning-agent—the silver-purple. This combination always results when tin-salts in an alkaline solution react upon silver-salts. That the silver-purple thus formed is really only an absorption-compound of metallic silver and variable quantities of metastannic acid has been shown by L. Wöhler, who proved that the silver-purple contained no acid combined with silver.

Although the colored colloid silver is very apt to revert to a coarse neutral-gray metallic silver, in the silver-purple it is ensured against chemical attack by the protecting colloid metastannic acid to such a high degree that it shows no inclination to enter into more complex forms. From this it can be understood that the warm brown to red colors of the tin-toning are extremely durable. The shade of the silver-purple naturally depends upon the structure of the reacting silver-grains.

When developed prints are to be toned with tin-salts they must first be bleached. For this a solution of 150 grammes of ferricyanide of potassium—in 1 liter of water, to which is added 1 ccm. of 25 per cent. ammonia, is used. Neuschwender mentioned that a deeper brown could be obtained by bleaching with copper chloride which transforms the metallic silver into a chloride. For this the following proportions have been found best: Copper chloride 30 grammes; muriatic acid sp. gr. 1.12 3 ccm.; water 1 liter. It makes no appreciable difference either in the color or the strength of the print whichever way it is bleached. The bleached print must be thoroughly washed and then toned; this can be done either in separate baths or in a combined bath of alkali and tin. The choice of alkali rests between ammonia, potash or soda in these proportions:

1 part ammonia (sp. gr. 0.91)	to 20 parts water;
1 part potassium carbonate	to 10 parts water;
1 part potassium carbonate	to 5 parts water.

As a clear solution of tin-salt is difficult to get, a little acid is added to clear it. It keeps well:

Chloride of tin	10 grammes
Muriatic acid (sp. gr. 1.12)	1 ccm.
Water	100 grammes

To obtain strong prints the tin-bath must be used

first, then the alkaline bath. After the tin-bath wash thoroughly in order to prevent neutralising the alkali by introducing acid from the previous bath; in this way constant tones are indeed obtained; but also weaker prints and impure halftones. By washing less thoroughly better tones are obtained; but in a short time the alkali-bath becomes turbid owing to the tin-bath being carried into it; clean work becomes impossible and the desired tone cannot be obtained with certainty. In my experiments I allowed the tin-bath to act for one to two minutes and the alkaline bath three to six minutes.

Ammonia produces a reddish brown; sodium carbonate a brownish-violet tone; potassium carbonate gives a tone between these two. As was to be expected, ammonia, as the weakest alkali, has the finest silver-grain; sodium hydroxide as the strongest gives the coarsest grain, the color of which approaches a neutral black. For practical purposes, only the combined method is utilisable. The soda-tin bath for this is prepared as follows: to 100 ccm. of a 10 per cent. tin chloride solution (free of acid) 70 ccm. of a 10 per cent. sodium-carbonate solution is added, shaking until the precipitate first formed is redissolved, then add 80 ccm. of water.

On bromide paper the sodium-tin bath gives a violet-black and the potassium-tin brown-black shades. The tones are brighter on gaslight-paper, on which the sodium gives sepia-tones closely resembling those of platinum; the potassium gives a somewhat redder tone reminding of selenium.—*Dr. Felix Formstecher in Photographische Rundschau.*

Reddish-Purple Tones

OF practical importance to photographers is the fact, which should be repeated, that the reddish-brown tone inclining to purple can be obtained by placing the print, after bleaching—but before the sulphur-bath—in a one per cent. solution of sodium carbonate. If the prints are changed to chloride of silver the purple tone comes out more decidedly than when the usual bath of ferricyanide and bromide has changed the silver to a bromide; for example, by using a freshly prepared solution of equal parts of a 2 per cent. solution of potassium permanganate, 3 per cent. sodium chloride (common salt) and 1 per cent. sulphuric acid. The bleached print is cleared by immersing in a weak acid-solution of sodium sulphite and washing for five minutes before sulphurising. *Das Atelier.*

Pinosafrol

UNDER this copyrighted name the Hecht Color Works have put on the market a concentrated solution (1:50) of a particularly soluble, pure safranine-dye which is very suitable for desensitising photographic plates. This solution may be used either as a preliminary bath or added to the developer, its action being precisely the same as the phenosafranine. Special instructions are furnished with each package.



OUR CONTRIBUTING CRITICS



"READ ME TO SLEEP."

JOHN J. GRIFFITHS

YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the last day of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

THE major fault with "Fairy Stories" is the utter lack of subjective union between the two figures. The woman does not seem to sense the presence of the boy; or, if she does, she seems to consider him more as an intruder than as a listener; even the book is turned forbiddingly away from the boy. The poor boy strains his neck to the breaking-point, and yet without seeming to take much interest in the story. To establish subjective union between the figures, we should, first of all, turn the book slightly toward the boy, inviting him, as it were, to share the stories. Then the mother(?) should turn an interested face toward the boy as if she were elucidating the text, and a finger placed lightly on the page as if to keep the place would help to connect the book with the figures. The mother's arm might even be placed around the boy to draw the figures together. The boy, in turn, should turn his face toward his mother with an expression half of delight, half of surprise, as if he already felt the presence of the fairies. Without this subjective union, the picture is hopeless. Minor defects are obtrusive clothing, inartistic coiffure and spottiness.

Dr. LEHMAN WENDELL

PHOTOGRAPHICALLY, the print appears good, the technical working apparently all right as to exposure developing and printing; but in the disposition of the subjects the print lacks many essentials as a pictorial work.

In the first place, practically only two tones are evident; deep shadow and highlight. There are no transitory halftones or luminous shadows to break the abrupt change. This is probably due to a light of too high an intensity, as is evidenced by the unpleasant halation about the white trim—upon the waist of the woman, the boy's neck-tie and the book, which might have been obviated by the use of a backed plate or the interposition of a screen to subdue the light.

Lines drawn through the center of each of the heads are found to be nearly parallel—a defect which can be easily remedied and which would improve the composition. Nor does any detail appear in the pages of the book, which, although a minor detail, might improve where all else is so sharply defined.

The attitudes of both subjects appear strained—not at ease as they should be in the proper interpretation of this motive. The interest appears more like that shown in the explanation of an arithmetic problem. The expression on the face of the woman is too severe, as shown in the set lips; nor is the position of the boy comfortable. It looks as if the woman had been reading and the boy sneaked up for an eye-full.

The title does not convey the meaning fully or tie up



THE PICTURE CRITICISED THIS MONTH

with the picture. I would suggest "Woman and Boy Reading" as more fitting.

J. CARROLL TOBIAS.

THE work of Mr. Allan in his picture "Fairy Stories" is very good, and the picture tells the story very well. In fact, there seems little to criticise, on the whole. However, there would be a little improvement if the boy's necktie were not so prominent; and, perhaps, the attitude might be a little less strained than it is. I should rather expect to see something of the printing on the page of the book if the exposure were just right; but to get the detail in the darker shadows of the picture the pages of the book may have been over-exposed and the type-detail lost. One other point might be noted, although with such a picture it might be hard to correct, that is, that the mother does not seem to be reading aloud, as she ought to be doing according to the position of the book and the boy.

A. L. OVERTON.

FROM a technical viewpoint, Mr. Allan was quite successful with his "Fairy Stories". I mention this, first, because it is the most noticeable feature about the print. The tonal gradations are everything that could be desired. But, unfortunately, technical perfection is not the only requisite. Composition and theme are factors that go to make a picture and we must deal with them.

First of all, let us ask the young man to straighten his head. With his neck bent as it is, one cannot escape

a sense of discomfort in viewing the print. Is it necessary for the boy to look at the book? Why not have him seated—a little farther to the right—and gazing up at the lady with an expression of extreme interest? This attitude would be more in keeping with the title. Seating the boy would also make less prominent the white tie he is wearing and, at the same time, help the composition.

I must also criticise the expression on the storyteller's face. She appears too deeply absorbed, too much in meditation. Cover up the rest of the picture and it is easy to conceive the lady in prayer. Her expression should help tell the story; an expression of wonderment, for instance, would be consistent.

The borders, we feel, are pressing the subjects too closely. Let us have a little more space above and to the right. And now, if the lady will slip her left hand partly behind her right arm, we will consider this criticism at an end.

GEORGE BEANE, JR.

THIS is, indeed, a creditable piece of work. The main objection being the strained attitude of the boy's head which overbalances the composition. The print is soft and the definition is pleasing; the concentration of the interest on the book is successfully carried out. The boy's necktie and hair are printed in too high a key and detract from the proper intended highlight. The present print will be improved by trimming one-half inch from top, one-fourth inch from left and one-eighth inch from the right.

J. THORNTON JOHNSON



OUR ILLUSTRATIONS

WILFRED A. FRENCH



It is not often that, in beholding a landscape for the first time, the discriminating camerist is satisfied with its appearance as a pictorial subject. Generally, the illumination is not right or the viewpoint can be improved, and to do the subject justice, it needs to be considered under more favorable conditions. But as this is not always convenient, the camerist makes the best of the prevailing circumstances and secures a picture. That is what happened to me as I motored over the Mohawk Trail last October, and is mentioned in my record printed elsewhere in this issue.

The view of the Cold River Gorge, which appears to have met the requirements (dimensions) of a front-cover illustration, impressed me as a subject that should be photographed with the aid of a color-screen or ray-filter; but in the circumstances the use of such a device was out of the question. Fortunately, I was able to utilise some low, well-lighted bushes in the immediate foreground to emphasise the curving line of the stream. Of course in making this picture I realised that the Mohawk Trail proper could be used only as an accessory in the composition. It is seen plainly at the left. I should have been pleased to have arrived at this point of the Trail one hour sooner; then the opaqueness of the shadows would have been avoided. The same picture appears on page 75.

Data: October 7; 10.15 A.M.; good light; Eastman 5/7 Cartridge Kodak (same as used in Europe, 1902, 1904, 1909); fitted with No. 4 Voigtlander Collinear 7 3/8-inch focus; at F/12 1/2; lens set for 100 feet distance; 1/25 second; Eastman roll-film; pyro.

"DEERFIELD RIVER"—page 76; October 7; 9.30 A.M.; little hazy; rest of data same as preceding.

"MT. GREYLOCK"—page 77; October 7; 10.30 A.M.; good light; rest of data same as in first.

"FROM HAIRPIN TURN"—page 78; October 7; 11.30 A.M.; good light; rest of data same as in first.

"THE MOHAWK TRAIL"—page 79. Made by Mrs. A. H. Hicks. Data: July, 4 P.M.; bright light; 5 x 7 Premo No. 6; B & L Lens; stop, 122; 3 seconds; dry-plate; Argon; contact Argon print. A halftone plate lent by Mrs. B. F. Caldwell.

"FRARY HOUSE"—page 81; October 12; 2 P.M.; strong sunlight; house in deep shade; stop, F/9; camera on tripod; 1 1/2 seconds; rest of data same as first. Frary House, one of the historically most interesting landmarks in Massachusetts, has the good fortune to be owned and properly cared for by Miss E. L. Coleman of Boston. Replying to my letter in regard to the ancient landmark, Miss Coleman writes: "... Ultimately, Frary House will belong to the Pocumtuck Valley Memorial Association, to be kept and shown as a typical colonial house. Built in the 1680's—our historian says—I have had "1689" painted upon the chimney. Samson Frary, one of the original Dedham proprietors, built it. With the exception of a small gambrel-roofed extension, to the beautiful Willard House, it is the only house now existing that was here at the time of the massacre. In the 1750's, the south half was added, it being then used as a tavern. In this addition is a very beautiful ball-room. The house was about to perish, when Miss C. Alice Baker, of Cambridge, bought and made this remarkably good

restoration, it being a very distinct gift to the community.

The thematic originality of "The Dragon-Fly" (frontispiece), by George S. Akasu, has been praised on several occasions in PHOTO-ERA. Singularly enough, it was listed as No. 1 in the catalog of the Boston Y. M. C. U. Camera Club's annual exhibition, April 3 to 15, 1922, and was considered by many as the *first* picture in the show in regard to pictorial novelty. As described by the author in his delightful article on the subject—see opposite page—the design is composed of the insect and the shadow of a nearby vine. The result is at once artistic and unique.

Data: September 24, 1921; bright light outside; about 3.30 P.M. (standard time); 3 1/4 x 4 1/4 R. B. Graflex; 7-inch P. & S. Synthetic Lens; at F/5; 3-time color-screen; 15 seconds; Wellington Anti-Screen plate; pyro, A. B. C.; print, A. C. B. R. Mat.

The exhibition in Boston last spring, of an interesting collection of pictorial photographs by members of the Copenhagen Camera Club, Denmark, led to a pleasant correspondence between the Editor and Mr. C. J. Brodersen, president of the club, one of the results of which is Mr. Brodersen's valuable views on art and photography, pages 61 to 64. The accompanying illustrations are a number of prints from the collection referred to, and which has been returned to Copenhagen. Mr. Brodersen, a civil engineer and a man of culture and sound views in matters of art, wrote an interesting account of the last Copenhagen Photographic Salon, which was printed in our January, 1921, issue. The pictures reproduced in this issue are fairly representative of the ability and taste of the amateur photographers—advanced pictorialists everyone of them—who compose the Copenhagen Camera Club.

In "On the River," page 61, the tug-boat is well placed, and amidst surroundings that are typical and picturesque. The technical qualities of the picture are exceptionally good.

The portrait of what appears to be a laboring-man, page 62, evinces decision and breadth in handling and the touch of an able interpreter.

The harbor-scene, page 63, is alive with pictorial interest. The several parts of this forceful composition take their places in obedience to an artist who is master of the situation. The towers and buildings recede in superb perspective, yielding in importance to the craft that dominate the picture. It is a characteristic bit of the harbor of Denmark's Capital and has been pictured with eminent breadth and feeling.

The successful "Night-Study," page 64, is peculiarly European. The artist has ingeniously contrived to arrange his material so that the result appears plausible. Consequently the centered position in the picture, of the cab with its attendant, affords little cause for critical comment.

The data for these Danish pictures had not been received at the time this issue went to press.

Comparatively few of the American tourists who visit Central Europe take the trouble to become acquainted with the striking and varied scenery of the Black Forest (Schwarzwald), a mountainous district which occupies the lower portion of the Grand-duchy of

Baden, near the Rhine. It is composed of extensive well-kept forests, picturesque farms with fine-looking cattle, and typical peasantry. Camerists making a tour on foot through this delightful region—where others go and find attractive pictorial material, as did Dr. Eyermann several years ago—will be well repaid for the effort. Among the many superb camera-subjects obtained in the Black Forest by Dr. Eyermann, the well-known photo-pictorialist, is a typical mediaeval farm-house pictured on page 83.

Data: March; sunlight; 10 A.M.; Linhof camera (6.5 x 9 cm.); Staebble Polyplastigmat; stop, F 6.3; 4-time yellow screen; 1/50 second; dry plate; metol-hydro; 5 x 7 enl. on Mimosa Verotype (gaslight) paper. The work of G. R. Ballance, the master-photographer of Swiss scenery, has not been seen in PHOTO-ERA for some time. The spot is an elevated village near Davos (page 88), the famous winter-resort in the canton of Grisons. But this is summer, delightfully pictured by this accomplished Englishman.

Data: Thornton & Pickard half-plate camera; 8¼-inch Goerz Dagor; Ilford Iso plate; pyro-soda; ray-filter; C. C. Platinotype print.

Advanced Workers' Competition

THE PHOTO-ERA jury was much pleased with the large number of entries in the "Bridges" competition. The quality was good and, in most cases, the subject was fully grasped and intelligently interpreted. There were many entries that deserved a prize, but as there were only three to be distributed several praiseworthy Honorable Mentions will embellish the pages of some future issues.

"East River," by Wm. B. Imlach, page 91, is a bromoil of outstanding merit—a truly artistic conception of a noble theme. The whole scene, with its potential force and vitality, makes a powerful appeal to the imagination. Like an outrushing railway train, the great bridge sweeps onward, over the head of the beholder and is quickly gone. With fine judgment, the artist took advantage of the smoke issuing from the advancing barge; for without it, one of the chief points of interest would be gone, and monotony would be the fate of the broad, black mass above the river.

Data: May, 1922; bright sunlight; Newman & Gardia Reflex Camera (6½ x 9 cm.); Ross Xpres 5¼-inch focus; at F 6.3; Imperial Panchromatic; pyro; 1/50 second; Bromoil print.

The serene beauty of the canal at Bruges, by Warren R. Laity, page 92, can make no vain appeal to the beholder, however critical. Grace meets grace, when the beautiful water-bird becomes a foil to the solid stone-bridge. The swan also serves to enhance the interest of the broad, deep reflection in the foreground. Altogether, the picture is one of few and simple parts and charms withal.

Data: Canal at Bruges, Belgium; August; 4 P.M.; dull light; 3¼ x 4¼ Goerz Dagor lens mounted in an Ilex Arme shutter, both fitted to a Butcher Carbine No. 5; lens used at F 8; Eastman Film; pyro; 1/25 second; enl. on Artura Carbon Black; Amidol.

The evening impression, by Wm. S. Davis, page 93, pictures a great bridge whose story is yet to be told. What a poem the great bard, Henry Wadsworth Longfellow, would have written! What an inspiration! But our artist, the photographer, has acquitted himself well. Daylight, under the searching rays of King Sol, was not a suitable time. Approaching evening—twilight—with its peace, repose and mystery, gives greater promise to the expression of deep feeling and solemn thoughts. Mr. Davis chose his opportunity wisely.

Data: August; 6.35 P.M.; good for the time of day; 3¼ x 4¼ camera; 6-inch Ilex Anastigmat; at F 6.3; 1/100 second; Wellington Anti-Screen; Edinol-Hydro; enl. on Velours Black Rough; place, Hell Gate channel.

Beginners' Competition

"WILLOWS," by Franklin Chapman, page 97, is a pleasing pictorial effort, but displays a fault committed frequently by a worker of more experience, namely, two-fold interest. Although the group of willows with their attenuated reflections is supposed to hold our attention, we are urgently invited to gaze upon the brilliantly lighted surface of the pond, beyond. If it had been possible to enliven that particular part of the pond with a group of boats (a rowing party), to relieve its present monotony, and to have the outlines of the willows somewhat subdued, and the present title changed to an appropriate one, a distinct theme and, possibly, a more logical result would have been effected.

Data: April, 1922; bright, cloudy day; 10.30 A.M.; Ideal B Ica camera; 5¼-inch Hekla lens; stop, F 6.8; 1/25 second; size of original negative, 3½ x 4½ inches; portion of negative was used; enlarged on Artura Carbon Black.

The picture of the shaded lane, page 98, like so many attempts by inexperienced workers, lacks unity of interest and balance of parts, although showing unmistakable taste in thematic selection. The path is almost lost in the generous distribution of light and shadow. The upper part of the nearest tree is in too deep shadow (easily modified) which gives the trunk a top-heavy appearance. The circular area of light (the sky) needlessly leads the eye in that direction, and the path itself—what little there is seen of it—seems to lead to nowhere, so that there is little significance in this promising scene. To be sure, a figure—a person leisurely walking along, meditating or reading a book—might have been a welcome addition to this attractive spot; but unless it were done well, the result would have been a regrettable procedure.

Data: May, 1922; 3 P.M.; bright light; 5¼-inch Goerlitz Anastigmat, F 6.8; stop, F/8; 1/10 second; Premo Film; pyro; print, Azo No. 2, glossy.

Example of Interpretation

THE subject in which Photo-Era Magazine wishes to interest participants in our monthly competitions is "Parks" as fully and clearly set forth by Editor Beardsley, elsewhere in this issue. An attractive and fruitful locality is the Public Garden (not Public Gardens), Boston, with its numerous pictorial possibilities. Although many camerists like to make pictures there at different seasons of the year—like Phil M. Riley, whose autumnal view, on page 94, is a pictorial example—others prefer the summer when the Public Garden is at its best and presents beautiful pictures of endless variety. For data, the interested reader is referred to Mr. Riley's illustrated article, "Landscape Possibilities without Foliage", April, 1922.

Our Contributing Critics

THE lady reclining in the hammock and requesting the young girl beside her to read her to sleep, has the appearance of an invalid—unless, as an obedient model, she is simulating physical exhaustion—so let us deal kindly, but justly, with the shortcomings of the picture on page 100. No data have been received.

Boston's First Photographer

THE erudite editor of the *Boston Herald's* daily column, "As the World Wags", has shown a marked interest in the early days of practical photography and, particularly, in the pioneers who first practised photography, professionally, in Boston. As none of the old-timers seemed disposed to come forward with the desired information, a member of the PHOTO-ERA editorial staff volunteered his services in the cause of our beloved art, and his letter, which appeared in the *Boston Herald* of June 19, is reprinted herewith:

"As a boy, I used to meet in the store of my father, who was a dealer in photographic supplies, Albert S. Southworth, associated with Josiah Hawes, in Tremont Row, as a photographer. The firm of Southworth & Hawes had gained a national reputation as first-class daguerreotypists. Mr. Southworth died about fifty years ago, followed by his partner in 1901, aged ninety-three.

In 1841, two years after the invention of photography by Daguerre and one year after John William Draper made the first portrait photograph from life in the world, Mr. Southworth was making daguerreotype-portraits probably in the more common size ($3\frac{1}{4}$ by $4\frac{1}{4}$ inches) at 60½ Court street. One year later we find him doing business as a daguerreotypist at 5½ Tremont Row.

In 1844 Mr. Hawes became associated with Mr. Southworth. The firm appears to have continued uninterruptedly and prosperously until the death of the senior partner. During the very early days of daguerreotype-photography this firm did not seem to have had any serious competition in Boston.

Indeed, the daguerreotypes of Southworth & Hawes—which, in later years, were made in sizes up to $6\frac{3}{8}$ x $8\frac{1}{2}$ inches and even larger—were generally recognised as the finest produced in America.

Among the firm's patrons were the most distinguished persons in this country. When I visited the old-time studio, at 60½ Tremont Row, in the eighties, I was privileged to examine superb daguerreotype-portraits ($6\frac{3}{8}$ x $8\frac{1}{2}$ plates) of Daniel Webster, Rufus Choate, Henry W. Longfellow, Oliver Wendell Holmes, William Lloyd Garrison, Thomas Starr King, Charles Sumner, Edward Everett, Ralph Waldo Emerson—yes, even Louis Kossuth and Jenny Lind.

Of John Whipple, who afterwards became the senior partner in the firm of Whipple & Metcalf in Temple Place, there is no available record until 1848, when he entered the ranks of daguerreotypists at 96 Washington street. As to John Black—mentioned by your correspondent, Mr. S. R. Smith, he entered the field of photography in the early fifties. The pioneers in portrait-photography in Boston, were first, Albert S. Southworth and then Southworth & Hawes.

WILFRED A. FRENCH."

"Boston's Graphic History"

TO THE EDITOR OF THE "BOSTON HERALD":

APROPOS the *Herald's* editorial of June 20 on "Boston's Graphic History", I am sure it will interest you to know that a systematic scheme for historic Boston has just been undertaken by the public-spirited action of one of the departments of the Young Men's Christian Union, its Camera Club. The members are now planning a thoroughly organised effort to save in photographic form what now remains of historical Boston, thus producing and preserving in photographic form a great group of pictures which for years or generations to come will be beyond price. To this end, there is

to be made a thorough study of Boston history and of the objects which still stand as witnesses of historic events, followed by the photographic study of these things for the making of the most effective pictures. Notes have already been made of about one hundred and fifty points worthy of study.

Persons who know of such points can do a service by reporting to the Camera Club at the Union. It is also urged that whoever knows stories of the old time, or traditions, should let the club know about them.

SYLVESTER BAXTER.

Boston, June 20.

IT will be of interest to our readers to mention the fact that Mr. Wilfred A. French, Honorary Member of the Boston Young Men's Christian Union Camera Club, began a collection of pictures of historic houses of Boston, Concord, Danvers, Newbury and other places, over thirty-five years ago. These pictures included many landmarks that have been removed or destroyed since that time, including, particularly, the birthplace of Oliver Wendell Holmes (the old gambrel-roofed house referred to in his works) which stood within the precincts of Harvard University opposite the Harvard Law School. It was removed by order of former president Charles Eliot. This famous landmark was the most important building belonging to Harvard University. Mr. French has two $6\frac{1}{2}$ x $8\frac{1}{2}$ negatives of the house, one made in the fall and the other in summer.

A. H. B.

Art and Faking

ONE of the misconceptions for which we fear photographers must themselves bear the blame is that a photograph is not "pictorial" unless it has been faked. It is strange that those who enunciate this view most loudly are among those who are most insistent upon the status of photography as an art; because the two contentions are mutually destructive. If a photograph is not a work of art unless the photographer has modified it by the use of some other art, then it is obvious that photography is not an art at all. It is necessary only to put the proposition in this bare form to show how mistaken it is for photographers to rely upon the processes of drawing or painting in order to get results which, if the subject is one that is within the scope of photography, they should be able to get without. We say nothing of the "legitimacy" of such methods, because we hold that the end would justify the means. Those who derive pleasure from a picture are not called upon to investigate the way in which it has been made. It is the end itself to which we take exception. A great many of the exhibits which find their way into our exhibitions ought to be excluded, not because they are not examples of pure photography, but because, from that cause, they are not good pictures.

The Amateur Photographer.



Tit for Tat

DOCTOR: "You'll have to send for another doctor!"

PHOTOGRAPHER (aghast): "Am I as sick as all that?"

DOCTOR: "I don't know how sick you are; but I know that you are the man of the *Daily Scream* that made a snapshot of me in an awkward position which appeared in your paper the next day. My conscience won't let me kill you; but I'll be hanged if I feel like curing you!"—Adapted.



ON THE GROUNDGLASS

WILFRED A. FRENCH



The Beautiful Land of Tyrol

ON the subject of putting the definite article before the name of the Austrian province, Tyrol, "The Nomad" in the *Boston Evening Transcript* states the case very clearly:

"On the subject of 'the Tyrol,' and also on the spelling of the name, read the foot-note by the editor attached to the article 'Tyrol' in the *Encyclopædia Britannica*, eleventh edition. The *Britannica* itself adopts the spelling 'Tyrol,' but the editor allows the author of the article, who is Dr. William A. B. Coolidge, the editor of the *Alpine Journal*, and probably the best authority on the Alpine peoples, to protest against this spelling. In Dr. Coolidge's opinion, the proper spelling is 'Tyrol.' This is also the Nomad's opinion. The word is derived from the Latin *Tierolis*, but for centuries it was written *Tyrol*, and the spelling *Tyrol* is merely the reformed or simplified German orthography, which eliminates the letter Y. There is no reason why writers in English should follow the German practice. It is properly *Tyrol*, not *Tirol*. And never 'the Tyrol.' The same *Encyclopædia Britannica* writer says that 'to speak of "the Tyrol" is as absurd as to speak of "the England."'. So far as this practice has been taken up by writers in English, it is a mere echoing of the French practice of putting the definite article before the names of countries."

While passing a few days in the beautiful city of Innsbruck, twelve years ago, I noticed that everybody referred to the country as "Tyrol." I never heard it used with the definite article, as seems to be the careless habit of some newspaper-writers. In other parts of Europe, where I have traveled, I never heard the Austrian province referred to in any other way except as "Tyrol"—without the definite article. However, I have heard the definite article used in connection with other localities as "Der Spessart," "Der Harz," "Die Bastei," "La Normandie," "Die Schweiz," "La Campagna," consequently, I have kept out of the pages of *PHOTO-ERA MAGAZINE* the incorrect term, "The Tyrol," since 1907, when I took editorial charge.

"To Err is Human"

TO ERR is human, to forgive, or to make right, divine, writes Nixon Waterman in the *Boston Traveler*. We trust that our willingness to make a correction will not be lost on our readers. There are haughty, stiff-necked newspaper editors who do not like to admit to their readers that they are not infallible. To acknowledge an error, they argue, lessens the public's faith in what it reads in the newspaper's columns. We look at it from a different angle. We contend that if the public sees a correction whenever an error is made, that when no corrections are forthcoming it means that no errors have been committed. At any rate, we shall always be ready to right any wrong that may be committed in this column.

It was one of those haughty New York editors, who once included in the column of death-notices the name of a man who came in the following morning and de-

clared, after the manner of Mark Twain, that the report was greatly exaggerated. He wasn't dead a little bit.

"But we never acknowledge an error or make a retraction," said the editor.

"Yes, but look here! You've said I'm dead and I'm not! What are you going to do about it?"

"Well, I want to be fair with you," said the editor, "and I'll run you in the 'Birth' column tomorrow morning and bring you back to life again."

Always Serene

BENNIE MORSE is one of the busiest and successful commercial photographers of the Hub. He is also optimistic and philosophic, and smiles wherever others are down in the mouth. His unvarying good-nature, even in the most trying circumstances, has won for him many friends. During that sudden, terrific rain-storm, on June 11, when Bennie happened to be motoring in the vicinity of Stoneham, chancing a big order to be executed during the following week, he found himself in the thick of the storm—when cottages were demolished, chimneys blown down and heavy branches were torn from trees and hurled into the roads. As Bennie was hurrying along in his Henry, a young elm which the gale had uprooted at the side of the road crashed squarely on top of the aforesaid Henry, completely wrecking it. Of course, the Henry came to an abrupt standstill and, together with its lone occupant, was crushed to earth. Presently, Bennie was seen to crawl out from under the demolished Henry and, with the help of friendly motorists, was assisted to his feet. He was dazed, but appeared to be uninjured. Rubbing a lump on the side of his head, Bennie grinned and exclaimed, "Oh what is so rare as a day in June!"

Of course, his car was completely covered by—tree and insurance.

August

THERE is nothing in nature more exhilarating, for the artist-photographer, than these beautiful mid-summer-days. The ripening summer has burned out its fierce heats, and warm days with clear, cool starlit nights are at hand. In the woods and fields the air is filled with music of the crickets and the shrill monotonies of innumerable insects. There is a sort of brilliant beauty in the flowers, this month, which seems to foretell of their coming dissolution. Along the woodland-ways and in the fields late wild-flowers bloom. Asters, chrysanthemums, hydrangeas and other flowering plants fill the August landscape with brilliant color, mingling deliciously with the ripening apples, plums and apricots of the mellow harvest-season that is now so close at hand.

The wise camerist, who is alive to his opportunities, will improve every moment to get the pictures that are to be had for the seeking in the great outstretched hand of nature, during this month. The Autochromist will not need to wait for the riots of autumnal coloring a month hence. He will find individual color-schemes in gardens, the woods and, if he is fortunate, in meadows, streams and brooks.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



The Photographic Fair, England

Of the whole series of Exhibitions held at the Horticultural Hall, Westminster, London, under the title of The Photographic Fair, no previous one has contained so varied a collection of apparatus and material for use in connection with photography, and certainly no other has attracted so large an attendance. After even a cursory inspection of the exhibits one cannot fail to be convinced that the manufacturing-industries connected with photographic appliances and material have entirely recovered from the disorganisation caused by the war, and that they are being prosecuted with more enterprise and energy than ever.

Although a proportion of the exhibits consist of amateur requirements, and are therefore particularly interesting to the dealer, there was more than sufficient appealing to the professional to be examined in a single visit. The Photographic Fair is not merely a shop on a large scale. In a shop it is impossible to show a sample of everything on the shelves to those who only want to see what is to be bought without any immediate intention of buying, but at the Fair there were fifty-two shops, each stocked with a sample of every article the shopkeeper has for sale, and a staff of assistants who were there for the purpose of showing and explaining the goods. The Fair thus provided a unique opportunity of finding out what there is novel and useful and of keeping in touch with current ideas.

The displays of negatives by the plate-manufacturers and of prints on various kinds and grades of sensitive material, of which there are many hundreds illustrative of the effects that may be produced, all of which specimens are the actual examples of the best work of some of the leading photographers, were in themselves worth a journey to examine.

I notice, as a sign of the times, the increasing use of the hand-camera in professional work, and the apparatus makers are showing many new and improved types especially designed for serious work. I am told that the sales to professionals have quite exceeded expectations.

The mount-manufacturers were, of course, able to show the full range of their productions, presenting a choice of tints and patterns far beyond that afforded by the most complete set of salesman's samples.

In the space available it is quite impossible even to mention the many ingenious labor-saving appliances for professional use, important though they are in these days of expensive labor, or the multitude of examples of beautiful workmanship and improved designs in ordinary apparatus. It is not an exaggeration to say that a photographer might have arranged for all his requirements for the year without having left the building. The crowded state of the exhibition at times testified to the great interest of the show. Indeed, one might have imagined that we were in a time of boom instead of in a period of depression.

At each of the annual Fairs there has been a room devoted to the exhibition of photographic portraits. This year the exhibition was more extensive than heretofore, and was devoted to a collection of sets of portraits, each contributed by an American, or in a few cases, a Canadian photographer. The number of

prints totalled about two hundred. There had been virtually, no selection, and as a valuable prize, a silver-cup, was offered in competition for the best set, each set may be considered as a sample of the best the artist could do according to his own views of what constitutes artistic and effective photography. There were cases where the divisional line between portraiture and figure-studies had been overstepped, but they were few, and did not affect the general aspect.

There is one impression, I think, everyone had formed—that there is a perceptible difference, as a whole, between the work there displayed and that of this country. That is to say, that it had a marked national character, and this apart from the fact that some of the subjects were more or less typical American men and women. The majority might all be English, and this remark applies to the children, with the exception of one picture of three charming little Japanese girls.

The cup was awarded by the judge, Mr. William Crooke, of Edinburgh, to a set of six photographs by Mr. F. A. Free, of Davenport, Iowa. They were all prints from about eleven by fourteen plates, and appeared to be direct photographs and not enlargements. They were all fine, bold, straight photographs, without any apparent dodging or "foozling," not that I deprecate any method of obtaining an effect—if it proves successful—but a bad faked print is worse than a bad straight one.

There was, I think, no print as small as $6\frac{1}{2} \times 8\frac{1}{2}$, and most of the work appeared to be direct, but enlarging-methods are now so perfect that it is not easy to decide without very careful inspection. Large direct photography has always been more extensively practised in America than here. The photographers there have pushed it, and by their business-methods have created a demand for it.

Space is not available for description or criticism of any individual exhibits even were I inclined to give it, but I am certain words are useless to convey any useful information without illustration. Many hundreds of visitors have viewed the pictures. It has been generally agreed that the exhibit was a very interesting show, and the many professional photographers I have spoken to also bear testimony to its instructiveness.

ALEXANDER MACKIE.

P. A. of N. E. Convention in New Hampshire

WE are informed that the Photographers' Association of New England is to hold its convention at Maplewood, New Hampshire, September 19 to 22, inclusive. The headquarters will be at the Maplewood Hotel which, with its annexes, cottages, casino and ballroom, will accommodate over seven hundred guests. Maplewood, N.H., is situated on the Roosevelt Highway and on the Boston & Maine Railroad. It is easily accessible from all parts of New England. There will be exceptional opportunities for all who attend the convention to visit points of interest in the famous White Mountains and thus to make this truly an ideal vacation convention. There have been many splendid conventions in other parts of the United States and now it

is up to New England to prove that it is very much alive. When it comes to natural beauty to attract the visitor, New Hampshire is second to none in scenery and historical associations.

The Value of a Reputation

THERE are many excellent firms in all parts of the world who enjoy unquestioned reputation for business-integrity and finished workmanship; but when a firm can trace its success over a period of sixty years, we cannot help becoming impressed. This statement is true with regard to the well-known name of Dallmeyer. To learn more of the important position held by J. H. Dallmeyer, Ltd., Church End Works, High Road, Willesden, London, N. W. 10, we suggest that our readers obtain one of the new, attractively illustrated catalogs that the firm will send promptly at request. The photographic lenses and apparatus described cover virtually every department of modern photography. The edition is limited and we suggest writing without delay.

Theodore C. Marceau

COLONEL THEODORE C. MARCEAU, the celebrated photographer, and founder of the Marceau Studio at New York, with branches at Boston and Philadelphia, died June 22, at his home, in New York City. Mr. Marceau was a shrewd and successful business-man, as well as a highly capable portrait-photographer. His business, conducted as a corporation—Marceau Company, Limited—will be conducted as heretofore. He leaves a widow, and a son, Theodore C. Marceau, Jr., who is active in the business.

"Selling Your Photographs" in Book-Form

No doubt it will interest our readers to learn that the series of articles, "Selling Your Photographs", by Frederick C. Davis, which began in November 1921 and were concluded in the June 1922 issue, have been revised and are to be published in book-form by the McBride Company. A new chapter, "A Survey of Markets," has been added. The book will be out in the fall under the title, "Making Your Camera Pay", and we believe that it will prove to be of much practical value to all camerists who are eager to derive some financial return from the use of their photographic equipment.

Attention: American and Canadian Photographers

THE Professional Photographers' Association of Great Britain and Ireland will celebrate the twenty-first anniversary of its existence by a Congress and Exhibition of Professional Work at Prince's Galleries, Piccadilly, London, W.1, from September 11 to 15, inclusive, and the prospectus and entry-form of the exhibition is now ready and can be obtained from the secretary, Mr. Alfred Ellis, 2, Vincery Villas, Hanover Gate, London, N.W.8. It is hoped, says *The Amateur Photographer* editorially, to make the exhibition the most representative of its kind that has ever been held; and the Association has certainly obtained one of the best picture galleries in London for the purpose. The exhibition is not to be limited to what is commonly

regarded as pictorial portraiture, but is to include commercial and technical photography, and will be open to Continental and American as well as British workers. Lectures and demonstrations of posing, lighting, printing-processes, co-operative advertising and business-methods, are to form a feature. It will be remembered that Mr. Pirie Macdonald suggested that the Congress should be held in the autumn rather than in the spring, to permit the attendance of American professional photographers, who cannot get away at any other time of the year. The P. P. A. is running a serious risk in changing the date of the function; but those responsible for its destinies no doubt consider that this was worth doing, and it will be interesting to see to what extent the American and Canadian professional photographers respond.

Activities of Alvin Langdon Coburn

A FEW years ago, no name was more prominently before the exhibition-going public than that of Mr. Coburn, whose photographic output was as remarkable for its quantity as for its high quality: alike in landscape and in portraiture, he succeeded in giving a distinctive character to everything that he showed. Recently, *The Amateur Photographer* goes on to say, he has been less to the front; but in the delightful district of Harlech, where he has built himself a cottage, he is still as keen as ever, although photography now has to share his attentions with free-masonry, astrology and mysticism. Mr. Coburn was born in Boston, Mass., and took to the camera in his very early years, becoming a pupil of Holland Day and of Mrs. Kasebier. He studied painting in America and in Paris, but "gave it up as an inferior medium." He has contributed photographs to all the leading magazines, both in England and in the United States, and has exhibited all over the world. He has, however, never competed for prizes or medals of any kind, and the "pot-hunting" instinct seems altogether lacking. Anyone who might think from his work that he is "only" a pictorial photographer would make a very great mistake; for his picture-making is founded on a very sound foundation of craftsmanship; and he is equally at home in gum-platinum and in that supreme test of technical skill, photogravure. He is also celebrated as the inventor of the "Vortigraph." As he is only forty now, he has evidently lost little time. Goat-rearing, pianola-playing, leek-eating and oil-painting are only a few of the incidental amusements of his Welsh retirement.

Stereo Photography in Natural Colors

PHOTO-ERA has always been an enthusiastic advocate of the practice of stereoscopic photography. The results are easy to achieve and for realism rival nature herself. Many devotees declare that a series of well-made stereographs knock motion-pictures into a cocked hat! Be that as it may, a sign of the times is the increased sale of stereo-cameras and the unusual enthusiasm expressed by its workers. Cost of the handy, pocket-equipment seems to be no objection in view of the superb results obtainable and which can be enjoyed by everybody.

There is considerable activity with regard to the use of Autochrome plates in connection with stereo-photography, for the beauty and realism of stereographs in the true colors of nature are a source of unlimited fascination and consequent delight. At a recent meet-

ing of the Boston Y. M. C. Union Camera Club, one of its members, W. M. Snell, was appointed head of the stereo-department of the club, thus assuring interested members effective and high-class results under the guidance of an experienced and recognised expert. Let other camera clubs follow this lead.

The main thing to remember, in the use of Autochrome plates, is correct exposure. What requires so many *seconds* with an ordinary dryplate, needs just so many *minutes* for an Autochrome exposure. Errors in exposure cannot be corrected as in a dry plate, although a slightly overexposed Autochrome can be improved. The case of an underexposed one is hopeless. Burroughs-Wellcome's Photo-Exposure Calculator is a safe

Outing of California Camera Club

AFTER reading the announcement and itinerary of the Yosemite Outing of the California Camera Club of San Francisco, held July 22 to July 29, one does not wonder that photographic enthusiasm runs high on the Pacific Coast. Although the descriptive matter reached us too late to mention the event in the July issue, yet we feel compelled to refer to it as an example of camera-club progressiveness that might well be followed by any club that needs rejuvenating or just brightening up. There are many beautiful National Parks, and other natural and historic points of interest, situated within reach of our leading camera clubs.



APRIL PRIZE-WINNING PICTURE, JOHN G. MARSHALL'S FLASH-POWDER COMPETITION
BY MRS. EDWIN MEYER, REEDSBURG, WIS.

guide to Autochrome exposures. Many alleged defects in Autochrome plates are usually found to be results of careless manipulation. When the rest of the contents of a box of suspected Autochrome plates is given to an expert worker to test, the results are nearly always highly satisfactory.

New Quarters for the P. P. of A.

WE are informed that the Pictorial Photographers of America have obtained larger and more satisfactory quarters at the Art Center, 65 East 56th Street, New York City. More and more the members of this organisation are taking a commanding position in pictorial photography in the United States and abroad. We hope their efforts will be increased and facilitated as soon as they are settled comfortably in their new and more commodious home.

Unusually delightful outings could be arranged, to the enjoyment of the members and to serve to strengthen and build up the entire organization to a higher state of efficiency and service.

Another excellent idea was contained in the June issue of *The View-Finder*, published by the California Camera Club, which was addressed to the visiting delegates of a number of important conventions that were held in San Francisco during June. We quote from the editorial page and commend the "welcome" idea to other camera clubs in whose cities there may be large conventions.

"We of the California Camera Club particularly welcome you here. It is our business and our hobby and our pleasure to know the West, to seek out the beauty spots. And, as we know them, we want you to take back pictures of them. Our own cosmopolitan city of seven hills; our magnificent homes; our Latin and Oriental sections; the beaches. Down the penin-

sula are homes, little farms and orchards or ranches, large and rich estates. Alameda, Contra Costa and Marin Counties furnish a wealth of changing landscapes. There is something to interest you in any direction you go. Or just in San Francisco—the multiple interests of a seaport city, the outlet of rich agricultural and farming districts, a metropolitan center will delight one. Wherever one comes from, whatever his likes, 'California can show him.' Attend your conventions; but do not leave without 'seeing the sights.' Take their memories back home—camera-pictures to always remind you, if possible, otherwise mental pictures. Try to see Yosemite and Tahoe and greater Central California. To all visitors interested in photography, a most cordial invitation is extended to visit the club-rooms, view the exhibitions on the walls and meet local artists—the club is the Mecca of the photographers of the Bay District."

Congratulations to Franklin I. Jordan

READERS of PHOTO-ERA MAGAZINE will remember many of Franklin I. Jordan's attractive pictures which have embellished our pages in the past. However, as head of the Jordan & More Press of Boston, Mr. Jordan has been obliged to curtail somewhat his photographic activities. But an event occurred that was of such outstanding importance that he resumed his photographic work to the exclusion of everything else. We refer to the arrival of Jane Atherton Jordan, Saturday, June 24, 1922. Needless to say, we extend our hearty congratulations. Lack of space prevents reproducing the picture referred to in the following data; but we believe that our readers will be interested to learn how quickly and successfully Mr. Jordan got to work under pressure. Referring to the picture of his young daughter, Mr. Jordan writes, "The picture was made last Sunday when the little Jane was just twenty-four hours old. Rain in torrents, making it dark as a coal-cellar, and a little wiggling infant provided some of the hazards of the game. Situated in a hospital, it also required some diplomacy to get permission (?) to upset the orderliness of the place by moving furniture, and to find an obliging nurse as an accomplice. But it was done, the film developed and seventy-two enlargements made that night. The next day the announcements were printed and in the mail. A $2\frac{1}{4} \times 3\frac{1}{4}$ Ansco Speedex camera, Tessar F 4.5 lens, Eastman film, one second exposure, tank-development, enlargement on Welling-ton Carbon Bromide, did the trick."

The 1922 London Salon

THE London Salon of Photography for the year 1922 will take place from September 9 to October 7, and promises to be an event of unusual importance in the photographic world. Entries are invited especially from pictorial workers in the United States, for the American Section at the London Salon is always a source of special interest.

Participants are reminded that owing to the little time for getting prints to London by the prescribed time—the last day to receive pictures being August 30—they must get busy right away, so that packages may leave New York City no later than August 22, on the "Aquilania". Other sailings of fast mail-steamer from New York are the "Homerie", August 19; the "Carmania", August 17; the "Mauretania", August 15; the "Olympic", August 12.

From Montreal, the "Albania" and the "Canopic",



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

CONCORD—A PILGRIMAGE TO THE HISTORIC AND LITERARY CENTER OF AMERICA. Illustrated by 60 reproductions in sepia tone of photographs of landmarks and famous Americans. Size, $7\frac{1}{2} \times 10\frac{1}{2}$ inches. Price, \$0.75, paper-covers; \$1.50 in decorated boards, postpaid. Boston, U. S. A.: Perry Walton. Copyright, 1922. All Rights Reserved.

This welcome and timely work is in reality a guide to Concord and appeals to the tourist who desires in a succinct form truthful and artistic pictures with corresponding descriptions of the places that have made Concord famous, and have converted it into a veritable shrine where dwell in spirit such men and women as Hawthorne, Emerson, Alcott, Thoreau, Channing and many others who, by their heroisms, writings and influence have added lustre to the once little town where was "fired the shot heard 'round the world."

The contents is divided into chapters—each appropriately illustrated—as follows: Concord: The Beginnings of Concord; The Concord of the Revolution, and The Concord of Literature. As the numerous, and admirable photographs show, Concord abounds in attractive and picturesque scenery, worthy of the finest efforts of photo-pictorialists. The tourist, satisfied with mere records, should not think of visiting Concord without a camera of some sort. The many landmarks and beauty-spots are very accessible. Concord is situated about eighteen miles from Boston and may be reached directly by railroad or automobile.

As to the book, it is a masterpiece of the printer's art, and highly credible to the good judgment and taste of the publisher.

August 19; the "Ansonia" and the "Megantic", August 12.

Ten days from the time of the vessel's sailing is the usual time for delivery of mail in London.

Entry-forms for the London Salon of Photography may be obtained from PHOTO-ERA, Boston Office, 367 Boylston Street, on receipt of a stamped, addressed envelope.

N. L. Stebbins

PHOTO-ERA regrets to record the passing of N. L. Stebbins, the eminent and widely known professional marine-photographer, with laboratory at 132 Boylston Street, Boston. He died July 9, at his home in West Somerville, Mass., after a long illness. Mr. Stebbins was a member of the Eastern and Boston Yacht Clubs, and was their official photographer for the past forty years, making pictures of the principal yachting events in Boston Harbor and vicinity. He also photographed many private residences at the North Shore and did other commercial work of a highly meritorious order.



ANSWERS TO QUERIES



H. P.—"Tintype" is a popular but totally incorrect term for "ferrotype." The fact is that there is no trace of tin, whatever, in a so-called tintype. The ferrotype (correctly named) consists exclusively of a thin sheet of iron coated with either black or brown varnish. The photographer (ferrotyper) immerses the ferrotype-plate in a silver-solution and exposes it while wet in a camera made for the purpose. He then develops, rinses and dries it. This wet ferrotype process was later superseded by the dry process—sensitized ferrotype-plates, sold commercially, and used also in automatic cameras, as well as by itinerant "your-picture-while-you-wait" photographers.

H. M. B.—Detail in shadows depends upon the lighting, exposure, development and the printing-medium, and has little to do with the quality of the lens, although the latter should be some form of a good anastigmat where fine detail is desired.

J. G. W.—There should be no trouble in copying sepia-prints provided you adopt an orthochromatic plate of medium speed and a color-filter of about eighth-time strength. Your ordinary developer will prove quite satisfactory if exposure and other conditions are taken care of properly.

W. A. T.—The best hypo-eliminator is potassium permanganate. Put enough into any quantity of water to turn it pink; the presence of hypo will clear the solution. Continue to treat with fresh permanganate-solution until the color is not removed.

J. M. B.—A rapid symmetrical lens is a rapid rectilinear with the front and back combinations of similar construction and of equal focal length.

W. M. A.—If there is only a slight scratch on the lens, it will have no detrimental effect whatever upon the photographs made with the lens. There is probably no necessity to have the lens repolished as it is almost impossible to detect even a large scratch on the resulting negatives.

A. G.—That you moved the camera during the exposure, rather than that it was out of focus, appears to be proved by the prints. It happens, sometimes, that even with a shutter-speed of 1/25 second that there will be movement shown occasionally. Try holding the breath at the moment of releasing the shutter and see if the resulting pictures are not sharper than the ones you sent us.

E. C. T.—It does not matter what the color of darkroom-walls may be, for they reflect only the light which falls upon them. The important thing is to make sure that your developing-lamp emits a safe light. Test it and make sure.

A. C. G.—Blisters on prints are usually caused by the wash-water being much colder than the fixing-bath. Allowing the water to fall a foot or more from a faucet upon prints will also cause blisters. Use a hose to convey the water from the faucet to the bottom of the wash-bowl.

O. G. C.—The color of a negative affects its printing time. Negatives of a brownish-black color should be less intense than those of a grayish black to give the same printing-quality, and the warmer the color, the longer the printing-time.

E. A. S.—To photograph any subject containing a very long range of light and shade, a backed slow plate is what is generally recommended. The exposure must be full, to get the gradation in the darker parts; and the development must be carried out very carefully, so as not to get excessive contrasts in the lighter parts. It is merely a matter of skilled workmanship rather than of materials or processes.

A. M. G.—To determine if there is enough light for an exposure ought to be easy for you to ascertain by the simple process of making a negative. The exposure must be full, to get the gradation in the darker parts; and the development must be carried out very carefully, so as not to get excessive contrasts in the lighter parts. It is merely a matter of skilled workmanship rather than of materials or processes.

G. G.—If you wish to dry negatives by artificial heat, first immerse them for a few minutes in a 1 to 30 solution of formalin to render the gelatine insoluble.

P. F. D.—To see the view in a finder when the camera is placed too high to permit it, hold a small pocket-mirror over the view-finder at an angle of forty-five degrees and look at the image thus reflected.

B. F. A.—A practical method to prepare a negative for bleaching out the background is to varnish over the parts you wish to retain with an india-rubber solution, such as is used for repairing bicycletires. This should be thin enough to apply with a brush. After bleaching out the background and drying the negative, the skin of rubber can be rubbed or rolled off the surface of the negative with the finger-tip.

H. K.—Glossy bromide prints are preferred by the editors of most illustrated papers. If the subject is one of great news importance, any available print will be used, whether of one or another printing-process; but in ordinary circumstances glossy prints are much more likely to be accepted.

F. G. B.—If you substitute a new lens in your camera, in all probability you will have to correct the present focusing-scale, for unless the new lens is of exactly the same focus as the old one—which is most improbable—you cannot use the same scale.

N. M. R.—To have the titles on your pictures print black from the negative, you can put the title in reverse on the negative itself by using an "ink" made of a few drops of a saturated solution of common salt, mixed with a few drops of a saturated solution of copper sulphate, thickened, if necessary, with a little gum to make it flow more steadily. Use a quill-pen or brush. The liquid will bleach the negative where it touches, and after a few moments the negative should be rinsed and placed for five minutes in clean hypo, and then washed well. This lettering will print in black.

W. E. C.—Whenever possible, use a small stop in preference to a large one. Even with F/4.5 lenses careful workers rarely use this maximum speed unless obliged to do so. Always consider the larger stops as "emergency-stops" to be used only when a picture may be made in no other way.



LONDON LETTER

CARINE AND WILL CADBY



SUMMER, with a real blue sky and a scorching sun, has come so early this year, that the holiday season has opened earlier than usual; and, already, at the beginning of June, the seaside and the country-side are filled with visitors, and the camera is everywhere in evidence. On a somewhat extended expedition around the favorite haunts of the amateur photographer, we have taken the opportunity to observe, at first hand, the change that has come about gradually from the big to the little camera; and we are convinced that it is an accomplished fact. We are not referring to the ordinary snapshooter, who is a "holiday-maker", pure and simple, plus a camera. He includes a kodak in his traveling-kit as a matter of course—it may be used; but is just as likely to lie about unopened. These "intermittent enthusiasts" always carry small cameras, and their procedure is unchanged from year to year.

It is the serious picture-hunting individual, the man who takes his subject and his apparatus, at least, as seriously as the sportsman does his guns and his game, over whom the change has come. It is a long time since we have seen an enthusiast struggling in the open with a 10 x 12 view-camera; and now, gone even is the half-plate ($4\frac{3}{4} \times 6\frac{1}{2}$) camera, and the tripod is extinct. But, although the photographer has lightened his load, he has not done so to the extent that might be imagined; for it is the great variety of reflex cameras, that have sprung up almost like mushrooms in a night, that have supplanted the "heavy artillery" of the craft. After close observation and many interviews, we have come to the conclusion that the $2\frac{1}{2} \times 3\frac{1}{2}$ reflex is the favorite. It is portable—although weighty—and ready for an exposure at a moment's notice. These are, no doubt, great advantages in many kinds of work, and enable far more exposures to be made than if the worker were tramping around with a tripod and burying himself, at intervals, under a focusing-cloth for lengthy periods. Not focusing, mind you; for that was always a quickly accomplished business, but studying the view.

Now, for the press-photographer, or the man who is out to seize the most fleeting expressions of Nature and is lavish with regard to the quantity of pictures made, the change seems all to the good. But we cannot help thinking that the earnest landscape-worker is placed at a serious disadvantage. For, after all, the most ambitious pictorialist cannot hope to make a dozen masterpieces in a morning. It is only by close and deliberate observation on the groundglass, with the camera firmly fixed, that he can study his subject comfortably, and shift his viewpoint, inch by inch, to perfect his composition. We shall be told that all this can be done with the camera in the hand; but can it, really, when our diminutive picture shifts and alters with every breath and each involuntary movement of the body?

As an illustration of our point, we may mention a case that came to our notice lately. A famous weekly illustrated paper required some good photographs of fruit-blossoms, to be delivered in a few days, and a skilful photographer of our acquaintance was commissioned to get them. He owns a motor-car, and lives in a fruit-district. There were three days in which to obtain the pictures, and the lighting was satisfactory

on two of the days. He is, moreover, a confirmed worker with a $2\frac{1}{2} \times 3\frac{1}{2}$ reflex. We had an opportunity to go through the prints before they were sent in. Our friend had been industrious, there were many pictures; but alas, only one was accepted. Now, we feel convinced that if he had worked slowly and carefully with a big camera, on the groundglass of which he could have seen clearly if the blossom was likely to tell its tale of spring and beauty, and had produced consequently only about a quarter of the number of negatives, there would have been a far more satisfactory ending to the story.

It will be interesting to notice, as time goes on, the effect of this change in apparatus on pictorial landscape-photography; and we should expect, as a result, the increase of good work that needs rapidity of action, and a decrease of the carefully composed pictures of old times.

We have been experimenting lately with the Kodak Ortho Portrait-Film in conjunction with a K.I. filter. Our subjects were woodland-landscapes and garden-pictures. The young, green verdure still retained its light tones, and bluebells were plentiful. The results were, at least to us, eminently satisfactory. The film is slow and, used with the screen, needed about three times the exposure of the par-speed film. Even then, it was fast enough to make slow instantaneous exposures and yet obtain full detail in the shadows, with the lens working at F/11. The quality of the negatives is delightful; and, as this film is far more contrasty than the par-speed variety, one must be extremely careful not to over-develop.

We much regret our inability to review in this letter Mr. Pirie Macdonald's show at the Royal Photographic Society's Rooms. We were in town, and one of our objects was to visit his exhibition; but the heat-wave was upon us, and a forced and early retreat to the shade of green trees, after a visit to the Royal Academy, was simply a necessity. Mr. Macdonald's exhibition has been looked forward to with great interest by many English photographers. To those who find a portrait more absorbing than the finest landscape, he appeals strongly. With him, as with the advertisement, "Every picture tells a tale". We know, from past experience, how amazingly he contrives to make each sitter live and be himself in these portraits.

Miss Olive Edis is one of our most "go-ahead" photographers. We can remember her as a member of the Lyceum Club Photographic Circle, when she first plunged into photography, professionally, by opening a studio at Aldeburgh in Suffolk, and specialised in portraits made in the sitter's own home. Last year, she made a tour in Canada, and later held a most interesting exhibition in London of color-plates of Canadian beauty-spots. Then, we heard that she had taken up motion-picture work, and her latest enterprise has been the filming of a society-wedding at the little Norfolk village of Holt.

The bride was well known, having lived in the country some time, and the bridegroom was the son of an oil-magnate, so that the function was important and well attended, and, consequently, Miss Edis made a

(Continued on page 112)



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



The following patents are reported exclusively for PHOTO-ERA MAGAZINE from the law-offices of Norman T. Whitaker of Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The patents mentioned below were those issued in June from the United States Patent-Office, the last issues of which have been disclosed to the public.

Albert S. Howell of Chicago, Ill., has received patent, number 1,417,526, a Lens-Mount for Cameras.

He has also been granted patent, number 1,417,527, a Focusing Device for Camera Lens.

A method of Treating Photographic Dry-Plates or Films has been granted to Joseph D. Bagley of Springfield, Utah. Patent, number 1,417,791.

Charles Kesses of New York City has invented a new Photo-Printing Machine patent, number 1,417,832.

Patent, number 1,418,033, has been granted to G. H. Sutcliffe of West Ealing, England. The patent is a new Means for Taking Photographs with Special Scenic or Background Effects

Photographic Camera patent, number 1,418,280, has been issued to John Bordignon of Rochester, N.Y.

Albert F. Sulzer of Rochester, N.Y., has received patent, number 1,418,405, on an Antistatic Photographic Film.

A reissue patent has been granted to Elmer E. Thrasher of South Cumberland, Maryland. Patent, number 15,377.

William S. Smith and Frederick S. Williams have received a patent in their joint names on a Camera.

Patent, number 1,419,406, a Magazine Film and Plateholder for Cameras, has been issued to Walter Pack of Takoma Park, Maryland.

A Photographic Device has been issued to Alfred G. Hague of Des Moines, Iowa. Patent, number 1,420,096.

Thomas E. Moorhouse of Hawthorne, Victoria, Australia, has been granted patent, number 1,420,440, on a Camera Applicable to Aerial Photography.



A Help to the Camerist

THE Pockscope is a pocket-telescope of over four and one-half times magnification. It is not a toy. It is a scientifically constructed, beautifully finished optical instrument of genuine merit and practical utility. It gives a sharply defined image of distant objects over four times as large as with the naked eye. And its vest-pocket compactness is appealing.

Here are the specifications: maximum diameter, 1 1/16 inches; length, when closed, 3 1/2 inches; length, extended, 5 inches; power, four and one-half times; objective lens, concavo-convex flint with double convex crown; eye-piece lens, double concave flint; finish, black crystallised lacquer; furnished in gray suede case. Everyone who loves the Great Outdoors, every camerist, every hunter, fisherman or camper, every motorist or tourist, every motor-boat enthusiast, every Boy Scout, and many others should be interested in this latest addition to the well-known Wollensak Optical Company's products.

A Rare and Beautiful Publication

As is well known, no country engaged in the recent European war has been so hard hit as Austria. With the loss of her only great seaport, Fiume, she is isolated, an inland country, her industries and resources paralysed, and without material aid from her former foes or allies. And yet, according to reports received from visitors who have but recently returned from Vienna, the people, though in want, are courageous and hopeful. Despite the great scarcity of the necessities of life, ridiculously low salaries are paid to the professional (intellectual) classes, artists, musicians, journalists, and the superbly high standards in the fine arts, including the opera, the stage, literature, photography, are gallantly maintained. Friends of the Editor, who on their three months' tour through southern Europe had intended to pass several days in the magnificent city of Vienna, increased the allotted time to three weeks, and then left reluctantly. It was mainly the unsurpassed, high-class performances at the opera-house and concert-halls that attracted them.

And now, after the suspension of publication of over a year, of the *Photographische Korrespondenz*—official organ of the Photographic Society of Vienna, and a number of other photographic clubs and bodies in Vienna—this splendid periodical reappears, temporarily, in the form of a special issue—a "Festnummer" or festival number, in commemoration of the sixtieth anniversary of the birth of the Photographic Society of Vienna. At the same time, this issue serves the purpose of a temporary substitute for a whole year's subscription (1922) of the *Photographische Korrespondenz*, whose regular monthly publication has been indefinitely postponed owing to the extremely unfavorable economic conditions which prevail in Austria.

The above-mentioned issue of the *Photographische Korrespondenz* is of the usual format, 6 x 9 inches, but of greater volume—114 pages of text and 20 supplementary illustrations. The latter represent the best of modern reproductive processes—halftone, photogravure, autotype, neotype, in monochrome and natural colors, including facsimile reproductions of four-color autotypes and autochromes—processes for which Vienna has ever been celebrated.

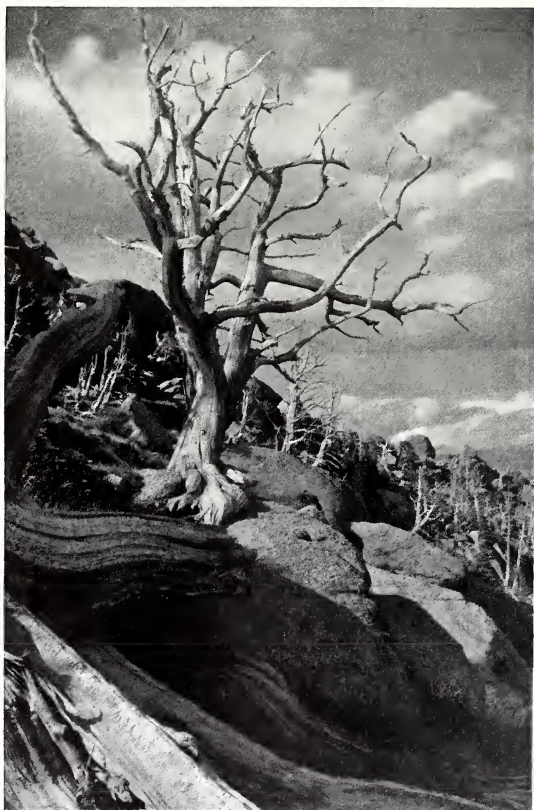
Photographers, and others who are interested in this special and eminently attractive publication, may send the equivalent in U. S. currency of 1500 Austrian Kroner—about \$1.00, by an American Express Money-Order, which includes the fee.

W. A. F.

London Letter

(Continued from page 111)

considerable amount of personal interest in her film. Her success will probably stimulate others. There is no doubt that a film of such an event would not only be of priceless value to the chief actors, but it would prove to be a most convincing historical record. We have only to imagine ourselves seeing the wedding of our great-grandparents on the screen—with all the proofs of manners, customs, dress and environment—to realise what a treasure of interest it would possess.



"GAUNT SKELETONS OF A VANQUISHED HOST!"
KENNETH HARTLEY



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No. 3

Above Timber-Line

KENNETH HARTLEY



TIMBER-LINE! Does the word awake memories of enthusiastic wonder and delight? If it does not, then a definition and explanation are necessary. Literally speaking, timber-line is merely the place on the side of a high mountain beyond which climatic conditions make the growth of trees impossible. This change is surprisingly abrupt and gives a very distinct impression of a line surrounding the mountain, rather irregular and varying in altitude, according to the direction of exposure and other local conditions; but still a line, very definite and seemingly impassable for any tree. In Colorado, timber-line ranges from eleven thousand feet to nearly twelve thousand feet in altitude in different parts of the state, although it may vary as much as five hundred feet on different sides of the same mountain, but always it is just as sharply defined.

To the mountaineer, however, this definition merely states the *location* of timber-line and says nothing about what it really is. The ordinary tourist is content to wander in the foot-hills; there are many beautiful cañons, dashing mountain-streams and waterfalls, wonderful places for picnics; why should he spend his energy to climb higher? A few will venture beyond the foot-hills to that delightful wilderness where the mountains are covered with forests of spruce and fir, the streams are full of trout, the bracing air at sunrise has a tang of frost wafted down from the snowy peaks in the distance—surely a glorious land for a vacation, and yet to the true mountaineer this is only the *approach* to the mountains; the real wonderland, the land that he loves, lies still beyond.

It is impossible to explain to a stranger just what it is about this high country that is so fascinating. It would be equally impossible to explain to a dweller on the great plains the beauty

of a moonlight-ride up the Hudson, or the thrill of surf dashing against a rocky coast, so that he would get any adequate idea of your emotions. So I know that the feeble attempts at description and the very inadequate photographs here presented cannot, by any possibility, convey to the reader a true understanding of timber-line scenery; I only hope that some may be induced, through reading this article, to "come and see."

The road to timber-line is a delightful road. It begins at almost any mountain-town in Colorado and winds upward through the forest, frequently crossing the little stream of clear, cold water that it follows most of the way, frequently affording a glimpse of the snowy peaks beyond and occasionally, through some unexpected opening in the trees, a broad view of mountain-range and valley is spread out below. The road is long, and steep, and rough. It is not a highway, but was built for hauling supplies up to some mine, long since abandoned, and the miners had neither money nor time to spend on road-building more than was absolutely necessary. The water from melting snow has washed it deeply and it may be necessary to go around some big trees that have fallen across it, for it has probably not been used by wagons for many years. But it is still a very delightful road. It is cool and moist and bordered with wild-flowers, the air is fragrant with the pungent odor of pine and spruce, little animals and birds sit up on stumps and logs to watch the strange creature walking along the road; perhaps some mountain-sheep or deer may be surprised in the road and hastily scramble up the steep hill-side. The sense of loneliness grows upon one, if he is city-bred; and when, finally, the road ends at a group of long-deserted buildings, their doors and windows gone, the log-roofs fallen in, the walls twisted into awkward angles by unequal settlement, the spirit of the wilderness seems to



"THE TINY BROOK FLOWS THROUGH A GARDEN"

KENNETH HARTLEY

be regaining possession and rapidly removing all evidence of man's temporary occupation.

Just a few steps farther and we are in the unspoiled wilderness where, to all appearance, man has never trod. And here, near its upper limit, the forest is more beautiful than ever; fine, open groves of shapely trees with no underbrush, glades filled with wild-flowers in the greatest variety of color and form, with here and there a long tongue of spotless snow reaching down from the shadow of some gigantic cliff to the very edge of a flower-bed.

Soon the trees become smaller and more scattered, the great, bare shoulder of the mountain rises close at hand, then, suddenly, they crouch down on the ground and sprawl around in every conceivable fantastic shape. Gnome trees! Centuries old, yet scarce two feet high! Stretching their twisted limbs over the rocks as if to hold on for fear they will be blown from their lofty perch on the mountain-side. For here, at timber-line, the struggle for existence is an unceasing warfare and these old veterans are the outposts of the great army in the valley below and are making a desperate effort to extend the line of the forest a few feet further upward toward the frozen summit. For hundreds of years they have held their ground against the terrific winter-storms, and each summer they have added a fraction of an inch to their stature and scattered a few seeds in the hope of starting

a new life to help in the struggle. Sometimes the battle goes against them, when lightning takes a hand in the conflict, and hundreds are destroyed in an hour; but for half a century longer they stand, erect and defiant, gaunt skeletons of a vanquished host.

Of course, there are easier ways to get to timber-line. On Pike's Peak one may ride up in an automobile or in a railway car, and in the Rocky Mountain National Park there is a road across the range which is passable for automobiles in the late summer and fall, but road-builders and railway-builders do not select the most picturesque side of a mountain for their operations, neither do the sounds and smells which accompany such modes of transportation harmonise with the spirit of timber-line. If one would realise what timber-line means to the mountaineer, and would feel the spell of the great stillness of high peaks, he must wander far into the wilderness, seeking, alone, the unfrequented places.

The first, distinct impression that one receives at timber-line is, undoubtedly, this idea of conflict. The fierce struggle for existence is everywhere evident. It is a beautiful day, calm and warm as spring-time; a few fleecy-white clouds float in the dark-blue sky; tiny, bright-blue butterflies wander from flower to flower, and everything seems as peaceful as in some sheltered valley. And yet, things are *not quite* the same



GLADES FILLED WITH WILD-FLOWERS KENNETH HARTLEY

as in the valley. The trees are not patterned after the type of their species; but each tree has had to meet its own problems and fit itself into its own particular niche in the rocks so as to best resist the winter-storms; every little plant has sought shelter behind some boulder, and the exposed surface of the rock is swept clean of vegetation and soil. But there is no suggestion of sadness in the scene; for, in spite of the evidences of struggle, nature seems to be rejoicing to-day, rejoicing in the triumph of the beautiful. All the fury of the storm cannot destroy, nor even mar, the wondrous beauty of this land.

One's first encounter with a summer-storm above timber-line is a thrilling experience. A great, gray cloud suddenly comes over the mountain above and settles down—slowly, lower and lower, covering the tops of the cliffs, then the nearer rocks, then spreads itself over the forest below. The day-light fades; the birds and insects

disappear; one seems to be caught in a vast dungeon with the top falling lower and lower and threatening to cut off every way of escape. In the strange silence the murmur of the brook becomes startlingly distinct; then, suddenly, a gust of wind rushes over the rocks, a terrific peal of thunder reverberates in the closed space under the cloud until one's whole body vibrates with it and the ground itself seems to tremble as the waves of sound roll back and forth between the cliffs. Then the rain begins to fall and comes down in torrents, the wind wails and shrieks and dashes the water into every opening between the rocks. The peals of thunder come closer and closer until the cañon is filled with one continuous, terrific roar; the rain is mixed with sleet and hail, and it grows colder and colder, and darker and wilder, until all other storms in one's experience seem tame in comparison. . . . Then the rain stops. The wind dies away. The thun-

der is but a distant echo from the retreating clouds. Then, between the cloud and the mountain, appears a strip of bright-blue sky; in a minute or two a ray of sunshine strikes the opposite cliff, the birds sing again, the bees hum over the flowers, the summer-sky has returned, and the memory of the storm seems like a dream. There is no mud; there are no broken branches; no battered, bedraggled plants to tell the tale of the storm's fury; everything is as calm and beautiful as it was before.

This is the land of contrasts. Winter-storms in the summer-time, snow-drifts among the flower-beds, beauty imbedded in the savage wildness. The atmosphere above timber-line seems always tense, as if nature were holding her breath in wonder at the sudden changes in the scene. The few sounds that reach the ear are peculiarly thin and faint; the sound of one's own voice is startling if one thoughtlessly breaks the strange stillness. Ascending to these great heights alone, one seems to be penetrating into forbidden places, into nature's most secret and sacred places, where man should not dare to gaze. I think it is because of some such feeling as this that strangers do not like to be alone in this high country. If a group of people go together, the spell is broken and those who are accustomed to being in a crowd feel more comfortable; but when one has once entered into the true spirit of the wilderness, these high places are a transcendent delight—in fact, the very climax of all mountain-experiences.

To cross a great stretch of spotless snow and realise the meaning of its unbroken smoothness—that no human being has passed that way this year—gives an added thrill of joy to the lover of these great solitudes; and if, beyond, one finds that superlative jewel of mountain-scenery—a timber-line lake, nestled at the foot of a gigantic cliff whose top reaches the clouds, reflecting in its dark waters the glittering peaks beyond—one is impelled to exclaim, "Who am I that this vision of surpassing loveliness has been reserved for me alone!" Although great banks of frozen snow reach to the water's edge, the air is laden with the perfume of a multitude of flowers; the music of a waterfall is mingled with the songs of many birds; the dark water is radiant with the mirrored image of glittering snow-clad peaks and primrose clouds, and the whole picture is *crystal-clear and sharp and brilliant as an emerald in a cluster of pearls!* The transparency of the deepest shadows is as wondrous as the brilliancy of the highlights, and yet there is no harshness, for the Supreme Artist has combined these superlative elements into the most perfect and restful harmony imaginable.

There are no weeds above timber-line; only nature's choicest plants grow here. The tiny brook flows through a garden of wild-flowers planted as effectively as if placed by an expert landscape-gardener; the terraces of the cliffs are carpeted with deep-green turf spangled with golden blossoms; every little crevasse in the rocks is filled with tiny plants as dainty and graceful as the most valued greenhouse specimens.

There is no dust above timber-line; the gray granite boulders are washed clean by the frequent rains, and every bit of soil is covered with dense vegetation. The breeze is as fresh and pure as a gale from the ocean. The old saying about snow-water being black does not apply here; for the water that runs from each snow-drift is as clear as crystal. There is no dirt in the air for the snow to bring down. This is one reason for the wonderful clearness of the atmosphere and the strange preponderance of blue in all the colors of the high mountains. This blueness is neutralised in the low country by the yellowishness of the dust and smoke in the air; but here the whole landscape is often presented to the eye in various shades of blue and purple and gray with scarcely any other colors. The spruce-forest on the opposite mountain-side is a deep ultra-marine blue; the rocky summits show the most wonderful shades of purple and violet—not the pale tints of extreme distance, but colors that are marvelously rich and deep. The sky is such a dark blue, sometimes, that it seems almost black, and the coloring of the clouds, even in the middle of the day, is often a wonderful blending of the most varied tints.

I think that every one who spends enough time above timber-line to overcome the first feeling of strangeness becomes fascinated with the high country; but the photographer, who has been striving to put some brilliancy into his pictures, striving to catch the faint outlines of distant mountains, is suddenly overwhelmed with a whole new set of problems and must entirely rearrange his ideas on almost every point connected with the making of a picture.

When the Editor suggested that I write something about my methods, my first thought was that I had no peculiar methods to tell about, for all the tricks that I know were learned from Puoro-Era, anyway, and ought to be common knowledge to readers of the magazine. But, on thinking it over a little, I decided that there were some differences in work among the high mountains and that what I had found out might be of interest to some who might come here.

The light at this high altitude has much greater actinic power in proportion to its apparent brightness than it has at sea-level, so it is com-



monly said that exposures should be only half as long. Although this is strictly true, the fact remains that at least nine-tenths of the photographs made here are greatly undertimed, and even the experienced worker often fails to understand the light-conditions that he finds. I think that there is only one way to meet the difficulty, and that is to discard completely all rules that have been used elsewhere, even including the indications of an exposure-meter, and to analyse the conditions on the basis of some fundamental principle. The intensity of the direct rays of the sun makes the highlights very bright; but the diffused light from the sky is very much weaker than at lower altitudes, so the shadows are very dark, and yet the clearness of the air makes these dark shadows quite transparent and every detail is perfectly sharp and distinct to the eye. This is the "land of contrasts" in more ways than one, and the first problem of the photographer is how to handle these extreme contrasts of light and shade. My rule is—expose for the shadows and let a double-coated plate take care of the highlights. It is too much to ask of a single-coated plate, even the best and richest emulsion, to preserve the delicate gradations of light on a sunlit snow-drift, when the exposure is enough for the darkest shadows on nearly black rocks; but the double-coated plate can do it.

To estimate the exposure required for such subjects is difficult, until one has had considerable experience. I find the Heyde Actino-Photometer very valuable in determining the exposure in doubtful cases, and all cases should be considered doubtful until one has worked at least a year at this altitude. This meter does not automatically measure the brightness of the light. It is an optical instrument that enables the eye to compare the relative brightness of different parts of the scene and to determine very closely the absolute brightness in terms of the effect on a photographic plate. It requires considerable skill and experience to use it correctly, but it gives a clearer knowledge of light-conditions, effect of ray-filters, etc., than can be obtained in any other way. The observer may select any part of the scene and decide, while looking through the instrument, just how much detail is desired in that part and ascertain the exposure which will give that amount of detail. If a ray-filter is used, it will not do to multiply the indication of the instrument by three or five; but the filter must be held over the aperture while the observation is made. I do not know of any way to get so good an idea of the action of a ray-filter as to study the effect through the Heyde meter for a while, looking at various parts of the subject with and without the filter. The darkest

part of the picture is frequently a mass of dark-green foliage, and it will be found that the indication of the instrument is exactly the same whether the filter is held over it or not, showing that all the light of that color comes through the filter undiminished. This is the chief object of a filter in this region—to hold back the light of other colors until the dark green has time to make an impression. I usually use a Wratten K2 filter; the K3 would be better for the foliage; but, unfortunately, it makes the blue sky too dark. With a gray sky, the K3 is best.

If the exposure is correct and the development sufficient to give the necessary printing-quality in the shadows, the scale of gradations in the negative will probably be too great for any printing-process except the lantern-slide. If a silver-paper is used, it should be of the quality intended for studio-portraiture, as this has a much longer scale of gradations than the papers usually used by amateurs. Even with this paper, it will probably be necessary to regulate the relative intensity of different parts of the negative—not for pictorial effect, but merely to get it all onto the print. For local reduction, I use the method of rubbing down with a tuft of cotton moistened with alcohol. The method should not be tried on a valuable negative the first time, for it requires some practice to avoid irregularities; but after sufficient skill has been acquired, it is safer than any chemical reduction-process. The best way to strengthen the thin parts of a negative is by staining with some soluble dye. Any color used for lantern-slides is satisfactory. I learned this some years ago from an article by Dr. T. W. Kilmer entitled, "Orthochromatising the Negative." I consider it the most valuable of all the "dodges" that I know. The best color to use is pink, because the appearance on the negative is much stronger than the effect on the print and, consequently, any irregularity is very noticeable. If the color appears reasonably even, the result will be all right. If a yellow stain is used, the effect on the print is much greater than the apparent strength of color on the negative; hence more care is required to avoid streaks. Almost any amount of "control" of the pictorial effect may be accomplished by these methods without any suggestion of hand-work being visible on the print; but I very seldom do more than modify some shadow that prints too dark or lighten the distance to give more perspective.

The soft-focus lens is altogether out of place in these mountains. Although there is nothing criminal in the use of such a lens here, *provided* that the title of the picture does not suggest that it was made in the Rocky Mountains, the worker has simply wasted all the effort required

WIND-SWEEP



KENNETH HARTLEY



SEA-TOWN



THE CREST OF THE RANGE

KENNETH HARTLEY

to reach the high mountains if he then proceeds to make an imitation of a picture of the foothills. It should be realised that any soft-focus effect misrepresents the country. This is not a matter of opinion or preference, but a plain statement of fact. The most striking characteristic of this high country is the sharp clearness of outline of every object near and far; the vivid sharpness of the scene above timber-line is simply startling to a stranger. I believe that the objectionable "wiry" sharpness, so often seen, is due entirely to underexposure and overdevelopment, and can be sufficiently avoided by longer exposures.

In mountain-photography considerable depth of focus is usually desired, so that a rather small aperture must be used; consequently, any old lens is just as good as any other provided that it has the proper focal length. This matter of focal length is the one essential thing to be considered, and the only thoroughly satisfactory equipment is a set of interchangeable lenses that may be used singly or in pairs to make up any focal length that happens to be required. The lens originally fitted to my camera is an ordinary rectilinear of about eight-inches focus. I can use either the front or back lens alone for distant views; but I found it very disappointing to back up against the base of a cliff or to perch the camera on the very edge of a precipice and then discover that the eight-inch lens would not quite get in all

that was needed for a satisfactory foreground, therefore I bought a wide-angle lens mounted to fit my old shutter. Some years later, I happened to find a second-hand lens of ten-inches focus, also mounted to fit my shutter; so I bought that, and now I always carry the whole set with me, that is, one shutter with the ten-inch lens in it and the other four lens-cells ready to screw in when needed. I find that with a small aperture I can use any one of these lenses with any other, so that I am able to make up any focal length desired from four and one-half inches to twenty-four inches. This is not very scientific, but it works. This whole assortment of lenses weighs less than the one highspeed anastigmat that I use for portraits and interiors and, for the mountain-pictures, is in every way just as good.



THE first pictures of the amateur are always educational. Be he child or man, they open his eyes to his environment and sharpen his sight. He sees every familiar object from a different angle, under a new light, in a novel web of relationship. The staid old things of his daily round spring surprises upon him at every turn. How frequently he catches himself saying, "I never thought it looked like that!"

HENRY TURNER BAILEY.

Pictures that have a Story to Tell and Tell It



HERE is a very interesting and important branch of photographic work that is just reaching the stage of development where it is attracting the attention of the business, the advertising and the commercial art-world. For the lack of a better term we will call it photographic illustrating.

It is not an altogether new thing, because photographs have been used as a means of selling merchandise for a number of years. It is only in the last few years, however, that photographs have been used so extensively to replace drawings and paintings in magazine-advertising.

Obviously, the next thing to the actual display of the merchandise itself is a good photograph of it. By a good photograph we mean a photograph that does not require any doctoring to show the good qualities of the merchandise.

A photographic map of a thing that must be worked up by an artist to make it presentable is not real. If it must be retouched, painted over, air brushed, outlined and in other ways made to look cold, dead and untruthful, it is coming to be frowned upon. The advertiser wants something that is real.

So it might be said that the photograph as an illustration has begun to come into its own. Instead of being merely a means to an end, the photograph has been made to tell the whole story, and it has been a very interesting one.

This development has necessarily been a gradual one. A photographer obtained a commission to make a picture. He found it was necessary to study his problem—to have a complete grasp of the selling-idea—a scenario for his picture-story. Possibly he failed a few times—that was to be expected. But with the experience so gained he was better able to choose his models, arrange his accessories, distribute his light where it would be most effective and so build up a picture that carried the exact effect of atmosphere necessary to create a favorable impression of the goods advertised.

The most encouraging thing about the work was the fact that the advertiser appreciated the photographer's efforts and was willing to pay for results.

Effects have been produced by photographic illustrators that could in no way be equalled by the commercial artist, and the truthfulness of these pictures—the fact that they were genuine photographs that did not lie, has made them the most convincing copy the advertiser uses.

It is true that there are not yet as many of

these photographers as there might be, because every photographer is not fitted for such work. The man must really be more than a photographer to be successful. He must have imagination, great patience, a wealth of ideas and ample time to devote to the work.

He may try out his ability in the time he can spare from his portrait-work or his commercial work; but if he is seriously to take up the work of a photographic illustrator, he must give it his entire time.

One of the essentials is a large list of models from which subjects of every description can be chosen. The photographer must make typical portrait-records of these models so that he can choose from such a list the exact type of model that he feels will fit the picture-story.

There are, however, many forms of illustration in which models are not used. These still-life illustrations are often just as difficult as those in which there is life, for to be effective they must give the idea of life.

You will find examples of this type of picture in almost any of the popular magazines. Such pictures are used to sell hats, gloves, furniture, food-products, automobiles, tires, silverware, linens, lamps and dozens of other articles.

Such pictures are made interesting by the care with which every little detail is made to do its part towards telling a story. If a hat is pictured lying on a table or chair, you will find something to indicate that the hat really has an owner who wears it and that it has just been laid there.

If a food-product is pictured you must feel that it is really going to be eaten and the surroundings must indicate that it is in good company. There must be nothing, however, to detract, no other food to offer a counter attraction. The emphasis must always be on the thing advertised.

The photographer must be a master of properties, with a keen eye for detail. He must see the little things that make the difference between pictures that live and that are dead.

One of Belasco's most interesting stage-settings depended for its realism upon a cat by a fireplace. No sooner had the curtain been raised than the cat stretched herself, walked over to a saucer of milk, and lapped it up. It was a little detail, but it made the stage-picture.

If you have the ability to make advertising and selling pictures it is none too soon for you to begin to make use of it, for there is no limit to the demand for good pictures. *Studio-Light*.



VENETIAN REFLECTIONS

L. A. GOETZ

SAN FRANCISCO SALON

The San Francisco Salon

SIGISMUND BLUMANN



THE first Annual Salon under direction of the Pictorial Photographic Society of San Francisco, was distinguished by two rather remarkable things: It surpassed in excellence of showing many old-established exhibits in more populous cities; and, of those prints submitted which had been accepted at some of the other salons, at least seventy-five per cent. were rejected here. And that without knowledge, on the part of the jury, of any previous records to influence them for or against.

The judges, with the exception of the writer, are personally known to artists all over this land. Mr. Banfield, erstwhile active pictorialist, is not

at this time in the exhibiting-class. Mr. John Paul Edwards is a friend of all pictorialists and of every exhibit. Mr. Clapp is an artist of note and curator of an Art Gallery. Mr. Felloes is Editor of *Camera Craft* and has a lifetime of photographic experience back of him. And I, least of all, know none to love or hate. We brought such judgment as we had to bear, and did justice from a conservative basis.

The fact is that although the West is not so unsophisticated as Easterners are taught to believe, it nurses a spirit of independence. It conscientiously and persistently refuses to accept formulae instead of conceptions and arbitrary standards as a substitute for broader ideals.



MARGUERITE DE LA MOTTE

ARTHUR F. KALES

SAN FRANCISCO SALON

It cannot be awed by names or distinctions, not substantiated in the work shown. The pictures were judged as pictures and not as the product of any person. Names were as nothing to us; previous honors were not considered. Some great ones suffered and some newer talent was approved, and I hope encouraged. Personally, it pained me to note the phlegmatic self-satisfaction shown in the contributions of men whom I have long revered from afar. It seemed as if they sent what first came to hand, convinced that any crumbs from their bounty must serve us as a feast. Thus, they found themselves poorly represented in a rich gathering. Were it not certain that these workers are in their prime, one might be tempted to think that while they were green they were growing and having ripened they had begun to rot.

The British contingent honored their nation. Marcus Adams, Capt. Alfred G. Buckham. Ainger J. Hall, F. J. Hawkins, Fred Judge, Alex.

Keighley, Herbert Lambert, Arthur J. Lomax, Bertram M. Park, Yvonne Park, H. Y. Stimmions, John M. Whitehead, Lionel Wood, Charles Wormald and Hugo Van Wandenoyen, Jr., form a galaxy of rare luminosity. The portrait of Miss Hawthorne Wood by Lionel Wood is of surpassing beauty. Subject, rendering and color are rarely beautiful. It is one of those photographs which proves photography very much the equal of any graphic arts in portraiture.

Of the New York group it may be said that Dr. Chaffee showed his usual charm of personality and technique. The outstanding figures were Dr. Charles Jaeger, and Clarence White. The exquisite bijoux of the former cannot be overpraised, and one, entitled "The Torso," by the latter, is to my mind the biggest, finest thing in the show. Coming from one who has never met Mr. White, this may be taken as sincere. Mr. Francis Orville Libby distinguished himself with one print, "The City—New York" and to

my way of thinking dilutes his greatness with two others. His aptitude lies along the way of straight photography which is an art, and does not lend itself to poster-like effects in which he seems strained. Nicholas Muray is startling, vivid, great. There is an originality wholly spontaneous in his work; and something in it seems to convey a sense of reserve-power that promises greater things to come.

Of our own western contributors Kales leads by a mile. None approaches him in conception and finish, and this is great praise when such men as Edwards, Weston, Anderson, Doolittle, Goetz, Neymann, Fleckenstein, Maurer, Struss, Williams, and such women as Brigman, Armer and Conti are in the same exhibition.

Germany sent liberally. A really fine representation. I wish it were possible to review the collection print by print.

Over a thousand prints were submitted of which one-third were accepted. Something over thirteen hours was spent in considering the lot

and many were reconsidered and some hotly debated. Possibly, a few worthy ones were rejected and it may be that one or two had best been left out. Such things will happen to prove that judges are human. Reproductions are inadequate, at best, to convey the merits of pictures and hair-splitting analysis cannot help the matter, so no didactic text or captions shall be forced upon the reader.

The exigencies of time and space permit no comprehensive review or minute critique. If any names have been omitted, it is because the catalog gives the whole list and that list is a blue book of pictorial photography. Many exhibitions have been more luridly exploited, there have been greater collections shown; but taking this salon, all in all, it was a noble show.

[Owing to conditions beyond our control, this review of the San Francisco Salon was crowded out of the August issue; but we feel that what Mr. Blumann has to say will be of interest and value, even though delayed.—EDITOR.]

A Delightful Camera-Region

ALFRED COHN



WHEN I sent to the Editor a list of the various classes of photographs I had made in the Catskill Mountains, in the past six weeks, he replied, "You seem to have a plethora of subjects . . .," and so I have. It has been my custom for a number of years to spend some part of the year in the Catskill Mountains, eighty to one hundred and fifty miles from New York, depending on the altitude. For the amateur photographer this region is a great find, and, of course, the professional who likes the woods will enjoy the uninhabited mountains as a change from the crowded city.

I found a bicycle to be the best way to get around, although if one doesn't mind a walk of five miles, virtually every district can be reached with the help of the train and auto-bus. I use a large view-camera most of the time, and I find the auto is not so convenient as the bicycle. The auto moves too quickly, and cannot go where the bicycle can; I use a wheel in preference to walking, because of the weight of my outfit.

Ordinarily, the ideal camera for pictorial work is the Graflex; but to me there are several objections. The reason I use a view-camera is because I need the large lens-board, the swing-back and horizontal shift, the much-to-be-desired large

negatives for gum and platinum prints, and the fact that a large groundglass is a balm for tired eyes. The Graflex or other hand-camera has the advantage of compactness and ease of manipulation and daylight-filling. When out on my wheel with the view-camera, it takes me fifteen minutes to get ready to make an exposure; consequently, I stopped only for the worthwhile subjects. The ease with which one can make exposures with a "hand-camera" is a fatal temptation to the amateur! I use orthochromatic plates in the Graflex magazine and Commercial Ortho Film in the view-holders. Two rapid rectilinear and two soft-focus lenses, a five-time ray filter large enough to cover the largest lens and a pinhole complete the outfit. I do my developing *en route* to make sure that there is nothing wrong with my outfit; but that is another story and a long one. I use a solid-wood tripod, because of its firmness in a wind and also because I frequently have occasion to place the tripod-legs in a stream or marsh. Metal tripods go to pieces under such treatment. Before going any further, I must warn the amateur photographer against the "bird's-eye view." There is nothing more disappointing than the print from a negative made from the top of a mountain. The air may be very clear, and the village ten miles away



THE GRAY-WEATHERED BARN

ALFRED COHN

very distinct to the eye; but the lens has other things to contend with, and only a very lively imagination will make the picture of interest. Another point I wish to make in connection with mountain-photography is the matter of clouds. Inasmuch as a mountain-picture often depends on clouds for its effectiveness, one should use every care to preserve the brilliance and beauty of the cloud-forms. A 3-time filter and an orthochromatic plate or film is sufficient for almost everything; but where there is a heavy foreground and brilliant clouds, a deeper filter is to be preferred. Except in the spring and autumn, when the foliage changes to orange and red, panchromatic plates are not required.

I have found that Ulster and Greene Counties are practically ideal for the amateur. The historic town of Kingston, reached by the unsurpassed Hudson River trip, is the gateway to the Catskills. Kingston has innumerable old colonial houses and landmarks, such as are seldom found outside of old New England. From Kingston

you can go northward to the sleepy town of Saugerties, or westward, by train, auto-bus or bicycle, to Woodstock, twelve miles from the river. Woodstock is the summer-home of the Student's Art League of New York City, and several smaller art-schools. A fine Art Gallery, lectures on art, excellent Sunday concerts in the woods, and the general "art-atmosphere" will surely make your stay there a pleasant one. The village of Woodstock is in a very beautiful valley, and many roads lead in every direction through the surrounding countryside. There are opportunities to photograph picturesque studios in picturesque surroundings; modern farms with barns and farm-buildings nestling beneath stately poplars. There are horses, cows, dogs, sheep, chickens, all in their natural environment. Throughout the different seasons, the fields are alive with boys and men, horses and farm-machinery, . . . plowing, reaping, haying, and gathering the fruit in the orchards. And all this is going on right out in the bright sun (the



"NESTLING BENEATH STATELY POPLARS" ALFRED COHN

farmer makes hay only while the sun shines!) with the blue-gray mountains for your background. Sunsets and cloud-effects can always be made to good advantage in the mountains, and the Catskills are no exception to this rule. State-roads run to every part of the Catskills and make it easy to get from one place to another; but the side-roads, from one farm to the next, and up the side of the mountain, are more apt to yield good photographic material.

Inasmuch as colors are represented by tones of one color in photography, we should not be misled by the seeming difference between the green mountains and the green foliage, or by the interesting visual effect of mist over the mountains. We must continually remember how those colors photograph, and make allowance for the fact that a slight error in exposure may result in failure. It is generally conceded that the best time of the day to make pictorial photographs is the early morning or late evening. Mountains are particularly good between 6 and 9 A.M.; a fine effect of distance can be obtained and there

is more chance to get "atmosphere" in your pictures. One must exercise the greatest caution when making pictures at these hours, to keep the sunlight out of the lens. Soft-focus lenses usually have deep hoods which act as sunshades; but the ordinary lens must be shaded, otherwise a greatly fogged negative will result. I would never warn against photographing against the sun, as beautiful pictures are often made that way . . . , but be sure and keep the sun's rays off the lens!

The Catskill Mountains abound in a great variety of beautiful trees, and the two counties I mentioned have almost every tree you are likely to find in the northeast. Birches, poplars, tall pines, fruit-trees and maples can often be made the principal object in the picture. Fields of buckwheat and other grain, stone-fences, gray-weathered barns, old stone-houses, sparkling creeks and ponds, all invite you to "Kodak as you go." And I am sure that you will never lack material if you spend your photo-vacation in the Catskills.



A PICTURESQUE VIEW
SEEKING THE SHADE
ALFRED COHN



LEAVING THE PIER

STOCKTON VEAZEY

Long-range Work

STOCKTON VEAZEY



HE possession of a fine high-powered rifle does not necessarily mean a full game-bag. Other factors enter into the situation, some of them beyond the hunter's control. It is the same in photography. Equipment is one factor; but a fine outfit does not always mean a bull's-eye every time we shoot. And when other elements are favorable, good results—sometimes unusual and very interesting results—are had with very simple improvised apparatus or attachments. The accompanying prints illustrate how a simple attachment greatly extended the scope of a camera beyond its ordinary limitations.

It was desired to do some long-range photography. A particular ship, more than a quarter of a mile away, left such a small image with an ordinary lens, that some way had to be devised to overcome this, and yet there were only about two minutes in each twenty-four hours when the ship would pose. She left her pier at nine o'clock every morning. There was a period of about

two minutes after she had backed out, stopped, and just before she got under way, when all surroundings were just right, including setting, background, etc. It will be seen, therefore, that the camera was only a small factor; but that one factor had to adjust itself to the general combination of things.

An old projection-outfit was found "lying around." (See illustrations.) Its lenses were removed and the single element of an equally old rectilinear lens, focus about 23 inches, was fitted into the projection-barrel. It worked at a speed of $F/23$. This barrel, attached by means of a flange to the lens-board of a 4×5 R. B. Graflex, gave an additional 6 inches capacity to the 18 inches of bellows on this instrument, making a total of 24 inches.

Examination of the ground-glass showed that the combination gave a very good image wide open without any diaphragm, and a trial-exposure revealed that it was possible to get a satisfactory impression on a fast plate at $1/10$ second, the



PROJECTION-OUTFIT

STOCKTON VEAZEY

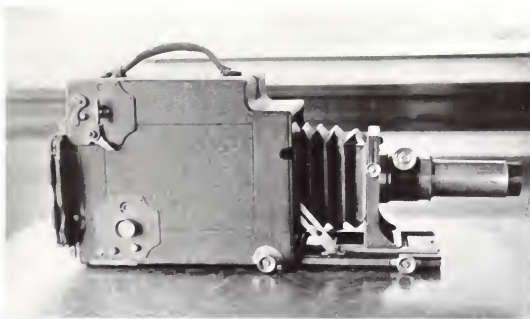
light being strong out on the water. Then I was ready to attempt to do things.

When you see a photograph of unusual interest or merit, you can safely put it down that it is either an accident, or what is more likely, the final result after many trials. It was just so with the picture of the ship herewith submitted. It is not an unusual picture, excepting that it gives somewhat of an airplane-effect in perspective, but it is given to show the possibilities of simple apparatus in overcoming limitations.

The first morning when we were lying in wait on the seventeenth floor of a high building, a stoker on a ship at the adjoining pier must have had an intuition that somebody wanted to use the clear atmosphere to make a picture, because he put on a lot of coal and the result was a heavy,

black cloud of smoke which would have done credit to a destroyer in the war-zone, and which completely enveloped the ship we hoped to photograph. That put us out of commission for one day. The next morning a heavy fog rolled in and settled over the bay and made photography impossible. The third day a switch-engine did the same thing that the stoker tried the first day. It belched forth black smoke right in front of the ship just as she backed away from her pier. So again the camera was put away.

The fourth morning, having become a little impatient and very much interested to do something different, I gave more attention to focusing for a sharp image, than to some other important things. For instance, the slide in the plate-holder was not drawn, and a perfectly good, carefully



ATTACHMENTS FITTED TO GRAFLEX

STOCKTON VEAZEY

calculated exposure was made against the black slide instead of the sensitive plate. That put us out for still another day.

On the fifth day the sun was bright and clear and things looked hopeful. At five minutes before nine the steamer was lying at her dock, peaceful and dignified, and ready for her daily trip. At nine she gave one short blast to cast off lines and began to back. Then out of nothing loomed up a little tug with two coal-barges in tow, and her fireman was seized with the same

demon as his brothers, that is, to see how much coal he could put into a cloud in the shortest time. His effort was a tremendous success, but the picture had to wait.

Let us not continue this tale of woe. It is too long; but the main point is that there came a time, as there usually does to the patient waiter, when all factors were favorable to the man on the job. Presto. The print tells the rest.

Long-distance photography is a field with interesting possibilities.

Button-Pressers and Serious Workers



WHAT constitutes a "serious worker"? We are constantly hearing photographers classified as "button-pressers" and as "serious workers," that one almost comes at last to believe that there is some distinct division between them. Yet, on looking into things, it is by no means easy to discern any such division, or to draw such a line that, by general acceptance, "serious workers" will all lie on one side of it, and "button-pressers" on the other. It cannot be decided by the mere size of the resulting pictures, as we have heard suggested; as every society contains expert members who work with the tiniest of cameras, and not all of them resort to enlarging. Nor would it do to define "button-pressers" as those who let the photo-finisher do, not only the developing, but also the printing and mounting; for there are those who do the whole of their photography themselves, whom no one would class as "serious workers."

It is always difficult to decide "where to draw the line"; and it is only in parliaments, debating-societies, and similar "word-chopping institutions" that it is accepted that if we cannot decide where to draw the line, it is evident that no line can be drawn, and that the persons or things referred to cannot be classified.

We should like everyone who reads this to put the question to himself: "Am I a mere button-presser, or am I a serious worker?" And if in modesty he feels that to class himself as a serious worker is to claim a status that he does not deserve, let him remember that the term does not refer to the quality of his work, but simply and solely to the spirit in which he performs it. His prints may be of the crudest and most imperfect kind—we all have to begin at the bottom; but if he takes his photography seriously, if he has once grasped the fact that there is something to learn in photography before he can make passable photographs and is trying to learn it; if he thinks

that his camera, instead of being a mere toy for a moment, can be a constant and inexhaustible source of interest and occupation; if the mere doing of some photographic operation is in itself a pleasure to him, irrespective of the result—then the class in which he should be placed is clear enough.—*The Amateur Photographer.*

[We heartily agree with our cotemporary. A sharp distinction should be made between the camera-user who hastily views an object or scene and releases the shutter, paying an expert, a photo-finisher, to perform the really difficult part of the work, and one who not only makes the exposure, but *does all the rest of the work himself*. The former is classed by the uninitiated with the latter, and gets credit for what he does not deserve. PHOTO-ERA, long ago, placed the button-pushers in a class by themselves, designating them as "snapshooters"—not "snapshotters"—and their practice of indiscriminate or hasty "button-pressing" as "snapshooting." These two designations seem to serve the purpose, and they are being generally used. Furthermore, their application seems to be appreciated by many "snapshooters," who, wishing to be recognised as serious workers or practical amateur photographers, have taken up the technical side of photography, from the developing of the exposed film to the making of the completed print, be the latter a contact or an enlarged print.—EDITOR.]



MANY people believe that if they had some one formula, the key to success would be theirs. Such is not the case. It is experience with a little brains, mostly brains, that really helps to make success in developing, and to know your product and balance your chemicals to suit it, taking into consideration your water conditions.

L. G. ROSE.



WOODED SHORES, THE WEIRS, N.H.

PHIL M. RILEY

Camera-Rambles Near Home

PHIL M. RILEY

FORTUNATE, indeed, is every camerist who is able to travel abroad, extending his knowledge, broadening his vision and increasing his collection of scenic photographs. To many of us, for one reason or another, this great privilege is denied and we are obliged to content ourselves with "seeing America first," last and all the time. Nor is this such a hardship, after all, if we can but see enough of it.

This great country of ours, some three thousand miles from east to west and sixteen hundred miles from north to south, is unmatched for diversity of climate, natural scenery, industry and outdoor recreation. Although situated wholly in the temperate zone, it has a sub-tropical climate in Florida and southern California. One does not have to go beyond its borders in order to find balmy sunshine, fruit-laden orchards and sea-bathing in midwinter, nor to find snow, ice and winter-sports in mid-summer. Bordering on both the Atlantic and Pacific oceans and the Gulf of Mexico, the United States has thousands of miles of rock-bound and sand-girt seacoast unsurpassed for its varied natural beauty.

Great mountain-ranges traverse both the eastern and western states. The perennially snow-

capped peaks of the Rocky and Cascade mountains, with great glaciers radiating about their bases, rival the most famous mountains of Europe in altitude and immensity. Who, indeed, can say honestly that Glacier National Park lacks anything of the picturesqueness and grandeur of the best in Switzerland? Vast forests, diminishing all too rapidly, it is true; such as have not been known to Europe for centuries still clothe the foothills of these great mountain-ranges; and in the Middle West between them lie thousands of square miles of plains, prairies and desert-lands as fascinating as the steppes of Russia, the veldt of Africa and the wastes of Arabia.

Great, navigable rivers fed by countless affluents and innumerable inland-lakes flow across the country in various directions; and, in interest and importance, vie with the Rhine, the Danube, the Nile and other great rivers of the world. Their canyons, gorges, palisades and waterfalls are among the wonders of the earth. The inland seas of no continent surpass the Great Lakes; nor are more numerous or more beautiful sheets of water to be found anywhere than the myriad small lakes of New England, New York, Wisconsin, Minnesota and the Northwest.



A GLIMPSE OF NEWFOUND LAKE, N.H.

PHIL M. RILEY

In a country so varied and extensive, virtually every known industry flourishes and every known recreation is practised. Its local color, its architecture and the mode of living are as varied as its geography, its climate and the occupations of the people. We need not go beyond the borders of our country to find great diversity of scenery, industry and life; yet, wherever we go within this great country, there is always something distinctly American about them all, indefinable as that something sometimes is.

The United States is a land of peace, prosperity, progress, pleasure and picturesqueness—a veritable promised land for the beauty-lover no less than for the opportunist seeking his fortune. With ten million automobiles in operation—one car for each eleven persons in the land—we Americans are now touring our own country more extensively, seeing it more intimately than ever before and are beginning more fully to realise what a vast and beautiful land it really is. Improved highways are ever bringing its wonders more easily within our reach; but it is a land of such magnificent distances, that many of us are denied the privilege of traversing it from ocean to ocean or from Canada to the Gulf. However, let those of us whose journeyings must, perforce, be more circumscribed take comfort in the remarkable scenic diversity of our native states.

New Hampshire, for example, one of the smallest states of the union, possesses little not

common to all the states along the Atlantic and Pacific seaboard; yet what a variety of beautiful natural scenery it affords the touring camerist! Briefly, the picture-opportunities may be summarised as mountains, forests, rivers, brooks, lakes, seashore, farms and pastures, towns, architecture, highways and industrial pursuits; each general subject in many aspects and in detail. The accompanying illustrations, all photographed in the "Granite State," indicate, in some measure, the diversity of camera-possibilities within a single state. Of the attractions mentioned, many of the inland states lack only the seashore, the mountains, the forests or the lakes. Only a few states lack two of these natural attractions, and invariably they are replaced by other characteristics of beauty and fascination when viewed under favorable conditions.

Therefore, let those of us who cannot travel in foreign lands, nor roam about our own country as extensively as we should like, find pleasure in seeking out the many possibilities of camera-rambles near home; for there is no locality in this fair land of ours in which a camera-enthusiast of "seeing eye" cannot find varied subject-material aplenty. The great difficulty is, that in the desire to go far afield, many good nearby opportunities are woefully neglected. Like charity, "seeing America first" begins at home and as soon as we begin to look around we realise this truth.



MT. TECUMSEH FROM WATERTOWN, N.H.
MAD RIVER AND CONE NEAR THORNTON, N.H.
PHIL M. RILEY



THE AUTHOR AT WORK

H. C. MCKAY

The Photography of Snakes

H. C. MCKAY

SNAKE-PHOTOGRAPHY opens up a field which is not only very interesting, but instructive as well. Many of us know amateurs who are photographing small animals, birds, or plants. In fact, virtually the whole field of nature-study is well covered except the photography of snakes and fishes. The latter requires elaborate equipment, but the former is open to all, the only bar being an absurd instinctive aversion. Because this is true, I am going to leave the technical points for a while and state a few facts with regard to the relations between man and the snakes. The snakes as a group are not dangerous; but, on the contrary, very valuable to man. They destroy thousands of rats, mice, noxious insects, and some of the larger ones attack and kill their poisonous brethren. There can be no question as to their economic value. Their desirability as pets will be more difficult to demonstrate, but it is not impossible.

Snakes are divided broadly into two classes, poisonous and harmless—there being no half-way species. By far, the greater number are harmless; but there is no way to distinguish one from the other, unless one is acquainted with the species under consideration. Hence I would emphasise this point. *Do not handle unknown snakes!*

The Spreading Adder, that squat, ugly, vicious reptile which distends its head and hisses so frightfully, is capable of harming you just as much as an angle-worm, no more. On the other hand, we have a slender snake, most beautifully marked with red, yellow and black bands, a snake with a small slender head, a most attractive reptile, yet this is the deadly American Cobra or Coral Snake. There is no authentic record of a recovery from its bite. Therefore, it may be seen that there is no index to the character of a snake. The broad head is worthless as a guide, so is the short, heavy body. Only absolute knowledge of the individual may be depended upon for safety.

The best way to learn to handle snakes is to obtain a King Snake, Bull Snake, Pine Snake or similar species, and grasp it without hesitation. It is with amazement that most people learn that a snake is in no degree slimy, and only slightly cold. A snake is not half so unpleasant to handle as a length of garden-hose! Soon one will become accustomed to the motion of the reptile and all aversion will pass away. When this stage is reached it is time to begin working with the camera. The points to be considered are camera, lens, emulsion, exposure and place.

Before taking up these points in detail it will be worth while to consider the result desired.

The photographs will fall into two classes, the scientific photograph and the purely pictorial photograph. The scientific photograph will be used presumably for study-purposes instead of the living reptile. Obviously, it should show the entire back, a portion of the side and a portion of the abdomen. The angle of view should be from 80° to 90° from the horizontal. This angle will enable the photographer to obtain a photograph that shows the entire dorsal surface as in Figure 1. The views of side and abdomen require another exposure, and the result may be obtained as in Figure 2. The pictorial work is best ob-

half-inch margin for working. Also, the distance should be great enough to operate the camera without scaring the subject—and snakes are nothing but bundles of nerves. With a six or seven-foot specimen a seven or eight-inch lens may be used. Personally, I use a seven and one half-inch Goerz Dagor, but use the rear element a great deal. The quality of the lens is of no great moment as the usual working-aperture is $F/32$. This is necessary to produce the depth and the critical definition necessary.

The emulsion to be used should be some red-sensitive emulsion. I use Eastman Panchromatic



KING SNAKE FROM 90° ANGLE

H. C. MCKAY

tained from an angle of 45° , as this shows the snake in approximately the position seen in nature. The snake should be coiled in its typical resting posture, or in a defensive attitude. At times, such a photograph serves as a scientific study as well as its primary pictorial purpose.

The camera to be used should be a view or triple-extension stand-camera, with a good rising-front, and swing-back. This camera should be mounted on a serviceable, heavy tripod, with a tilting-top. The lens should be of approximately fourteen-inch focus for a five by seven plate, although a ten or twelve-inch may be used, depending upon the size of the snake. The end in view is to have the image cover a space about four by six on the five by seven plate, allowing a

Film, with a W & W K3 filter. This combination gives remarkable results with the infinite number of red, brown and yellow hues encountered. Except with black snakes, or similar specimens, the usual color-insensitive emulsion is worthless and the orthochromatic is but little better. In fact, I now use Panchromatic Film in almost all of my work except in portraiture.

The exposure should be made in some location where there is plenty of diffused light, but no direct sunlight. This lack of brilliant light makes the first cut in the time of exposure. The film used is only half as sensitive as ordinary roll-film, and a five-times filter is used. In addition, the diaphragm is stopped down to at least $F/32$, so that speed is out of the question. On a bright



BROWN WATER-SNAKE, SHOWING SIDE AND ABDOMEN
 PINE SNAKE FROM 45° ANGLE
 H. C. MCKAY

summer-day in Florida, in the shadow of a building with good north light, I give about fifteen to thirty seconds, using an actinophotometer as a basis for judgment. This necessarily long exposure means that the subject must rest quietly and undisturbed; and, even then, many films will be spoiled and many fervent words wasted when friend snake decides to take some exercise about the end of the fifth second. However, that is unavoidable, and is the fortune of war. Don't try to overcome this by chloroform, or worse, by killing the snake. The tensed muscles are relaxed and the subject, no matter how carefully posed, will lack life-likeness. An amateur in this field would be amazed to see a herpetologist run through a collection of photographs and reject all of those made of snakes that were dead or under the influence of chloroform. I learned this by bitter experience.

The location, aside from the light desired, should be a bit of sandy ground with a sparse growth on it, for the naturalistic poses, and those for scientific purposes should be made with the subject resting on a perfectly level surface covered with a half-inch of carefully screened sand. By choosing a contrasting shade of sand, some very fine results may be obtained. The sand makes a uniform, unobtrusive background; and, even

when enlarged to 16 x 20, does not spoil the effect of the picture. Avoid carefully all fabric or any surface with a geometrical design.

The matter of posing the subjects is the most difficult problem of all. There is nothing to do except to wait until the snake settles down. Of course, there are a few helps, but not many. The warmer the day, the more active will be the snake. The smaller they are the more active, as a rule. Some snakes, such as the garter snakes, will lie quietly if their head is hidden. After some minutes lift the concealing object carefully—and *maybe* your subject will remain quiet for the necessary quarter of a minute. Count yourself lucky if you get two good pictures from a dozen exposures. My best day was fourteen pictures from sixteen exposures; but the gods smiled on me that day.

Should any of my readers take up this very interesting work, I should like very much to hear from them and to exchange work. It is a field which needs attention and one which once entered into will not be abandoned quickly. Impossible as it may seem now, every one of my readers who attempts to photograph snakes will discover that a real affection for these reptiles will grow steadily, and all aversion will finally disappear as the work grows in interest.

Chart for Finding the Depth of Focus for any Photographic Lens

H. W. LEE, B.A.



THE two charts given will supply a complete solution of the problem to find the "depth of focus" (or more correctly "depth of field") under any conditions of focal length of lens and aperture and object-distance. The method of use is as follows:

The aperture chart (Fig. 2) must be traced on transparent paper or tracing-cloth. It will only be necessary to copy as many lines as one had stop-marks on the lens. If the largest aperture of the lens is (say) F 6.8 the line for this would lie between those for F 5.6 and F 8. Now, 6.8 lies midway between 5.6 and 8; so draw the line for F 6.8 midway between those for F 5.6 and F 8. (This is not absolutely accurate, but sufficiently so.)

Now, the aperture-chart has to be applied to Fig. 1, so that the center of the radiating lines lies in the right-hand (sloping) line at the point

representing the object-distance, and the axis (the broken line in Fig. 2) lies parallel to the horizontal lines of Fig. 1. Here, again, if our object distance is 5½ feet, we place the center midway between the 5 and 6 marks. Now carry the eye along the sloping line representing the aperture we propose to use; this will cut the vertical line representing the focus of the lens at a point corresponding to the object-distance still in focus (read off on the vertical scale). There are two lines for each aperture, one above and one below the horizontal; these give two object-distances—one nearer the lens, the other further than the point focused on. These two object-distances represent the extreme range of distances which will still be sharp.

An example will make the method clearer. Let us suppose that we wish to photograph an object at 6 feet, 6 inches distant with a 5-inch lens, at F 16. At what distances will objects

be still in focus? Applying the aperture-chart so that its center lies midway between the 6 and 7 marks on the right-hand sloping line and its axis horizontal, it is seen that the upper F/16 line cuts the vertical through the 5-inch focal length line at the place where the 8 feet object-distance horizontal line cuts it. The lower F/16 line cuts the 5-inch vertical midway between the 5 and 6 feet horizontals. Hence, all objects between 5 feet, 6 inches and 8 feet will be sharp.

Another problem. What is the hyperfocal distance for a 7-inch lens at F/8? Here we apply the aperture-chart so that the upper F/8 line cuts the 7-inch focus line at the upper extremity (representing infinity). We see that if the axis is held horizontal and the center on the right-hand line, it lies at the mark 100. Hence, 100 feet is the hyperfocal distance, *i.e.*, for a 7-inch lens at F/8 all objects are sharp from 100 feet to infinity when the lens is focused at 100 feet. (It is also seen that objects between 50 and 100 feet will be sharp, too.)

Most people are concerned only with a single lens. For their purpose, the chart in Fig. 1 can be simplified into two lines—one vertical representing the focus of the lens, the other the sloping line on the right; each can be scaled from Fig. 1. It would be less confusing to use such a simplified chart rather than the more complicated and generalised one shown in Fig. 1.

How to Construct a Depth-of-Focus Table.

Anyone can now construct his own depth-of-focus chart. First, the hyperfocal distance at

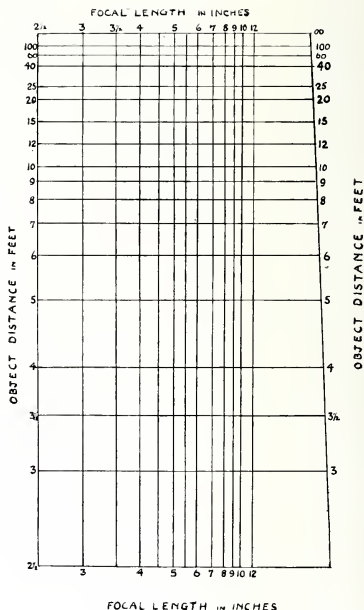


FIGURE 1

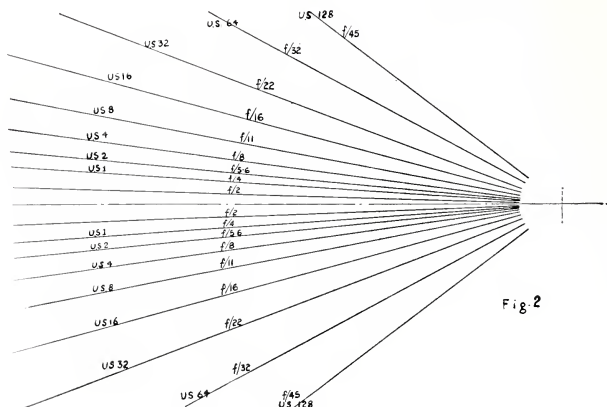


Fig 2

the full aperture can be found as in the example above. Next, the distances in focus at 25 feet can be found: the same procedure can be gone through for 15, 10, 7 and 5 feet. Then the same quantities can be found for all the other stops in turn, and the complete results shown in a table, which can be written on a card and carried with the camera.

Focal Length, Inches.

Aperture	Hyper-focal Distance	Distances in focus when object focused on is at							
		25'		15'		10'		7'	
		Near	Far	Near	Far	Near	Far	Near	Far
F 8									
F 11									
F 16									
F 22									
F 32									

The charts have been constructed on the

basis of a circle of confusion of $1/1200$ of the focal length, *i.e.*, of $1/100$ of an inch with a 12-inch lens. The reason that this standard is adopted is that 10–12 inches is the standard viewing-distance and $1/100''$ of blur is not noticeable at that distance. If a photograph is made with a shorter lens, say 5-inch, it should be viewed at a distance of 5 inches to get correct perspective; otherwise the perspective is exaggerated. It being impossible for most people to see clearly at a distance of 5 inches, either a 5-inch focus lens must be used as a magnifier or the print should be enlarged about twice size. In either case, the circle of confusion is magnified and so should be less for a 5-inch than for a 12-inch lens. The chart takes this into account. If the print is still further enlarged, it should be viewed from a greater distance (for correct perspective) so that the enlarged blur is exactly counteracted by the increased viewing-distance.

Present-Day Portraiture

THOMAS BELL, F.R.P.S.

TO secure your interest to-night, I am going to rely mainly on a set of slides from pictures which fairly represent the best work in portraiture being done at the present time, not only in this country, but in America and on the Continent. I should like, however, to say something in the nature of a stock-taking. We have arrived at a period in photographic portraiture when it is advisable to pause, look around, and see exactly where we stand. What is the position of portraiture to-day? If we go back along the road we have traveled to the early forties, we find D. O. Hill making his pictures by the Fox Talbot process, and the question which at once jumps to our mind is: "Have we made any real progress since Hill's day?" It is only fair to say that Hill was not a representative photographer of his period. He was not, strictly speaking, a photographer at all. He was an artist, who took up photography as a means to help him in painting his pictures, and it is doubtful whether he ever did much of the actual photography himself; it is probable that Adamson, his partner in the studio at Edinburgh, did most of it.

Photography was then a scientific novelty. It had not taken its place in the commercial world, nor had it come to be looked upon as a means of artistic expression. For many years the class of men who followed Hill in photog-

raphy were of quite a different stamp. They took it up either as a scientific pastime or purely for money-making. Itinerant photographers sprang up in large numbers. They were in evidence at fairs and country-gatherings of all kinds. The calling of the photographer, in those days, was not considered a high one. I remember my grandmother saying, when I told her that I wanted to be a photographer, that she would rather I took up something respectable.

The various pictorial stages through which photography has passed may be classified somewhat as follows: the small portraits, full or three-quarter length figures, cartes de visite, again mostly full-length, and then cabinets. Each stage was accompanied by the pedestal, the plaster-column, the baronial-hall background, and so on. Twenty-five years ago we had the Reynolds and Gainsborough backgrounds, then the Rembrandt lighting, and then the low-key style of portraiture where everything was in deep shadow. For a short period we had the fuzzy, gum-bichromate style, and quite recently the white background and the sketch-portrait. At all periods there have been one or two photographers who have stood out from the rest, and, in my opinion, there never has been a period when such a large percentage of the photographic work turned out was of so high a standard as it is to-day. This is due very largely to the fact that, of recent years, a different class of men

have taken up photography—men with artistic perceptions, men of taste, and men who can read character.

Any man of average intellect can be taught to make photographs, just as he can be taught to draw and paint. The ability to do either one or the other, however, does not make him an artist. It is true that the more skill he has as a photographer or painter, the easier it will be for him to give expression to his ideas; but no amount of technical skill will enable him to choose the most distinctive pose. There are thousands of good photographers who are totally ignorant of the art of portraiture. These men are doing useful work in making records of the faces of their generation, but their photographs are bloodless and lifeless, and will never be anything else. A portrait by one of these men bears much the same relationship to a portrait by one of our best photographers as the plan of a battleship bears to Turner's "Fighting Temeraire".

What is the outlook for the future? Are our leading portrait-men on the right lines? Are their principles sound? In some directions one can discern very hopeful signs, indeed; in others, nothing but indications of a backward movement. Among the hopeful signs is the smaller amount of retouching done on portrait negatives. Photographers are beginning to understand that the human face is not made of alabaster. The tone and texture of the flesh and the subtle modeling of the features cannot be represented by smoothing up the negative and making the features appear as if they had been boiled or inflated by a bicycle-pump. A large number of portraits turned out by professional photographers are hopelessly ruined by the retoucher. There is no artist living who can make a drawing as perfect as photography—the gradation and form are beyond the power of the human hand to imitate. To try to improve this by means of bad draughtsmanship makes the result look ridiculous. And it is a healthy sign to see portraits which show little or no evidence of this maltreatment.

Although retouching the face on the negative has diminished, there has been a recrudescence of a form of retouching which is still more inartistic. A few years ago nearly all photographers were urging what was known as the sketch-portrait. There has been nothing produced in photography more likely to give the cold shoulder to anybody with artistic perceptions than this ill-advised attempt to introduce a new style. Good photography and bad drawing do not blend, and the sooner photographers realise this, the better it will be for them. Then, in addition to the sketch-portrait, there has been in vogue for a number of years a method of drawing in back-

grounds on the negative. Everything I have said about the sketch-portrait applies to this. Still, allowing for these drawbacks, it is quite evident that retouching in portraiture is beginning to be kept a little more under control.

Another hopeful sign is the modern style of lighting. The best portraits produced to-day are undoubtedly those which show indications of a return to simple, straightforward lighting, such as has been used by the great painters of all ages. It has taken photographers years to find out what a very simple thing is the lighting of a portrait. Books and articles on studio-lighting have all treated lighting as a complex problem, and have ignored the basic principles and set aside laws which were established when the sun first began to shine. Instead of getting their knowledge by a careful study of the effects of lighting on casts and models, photographers struggle blindly with their reflectors, screens, and diffusers until they have landed themselves so far from nature and truth, that they are hardly able to appreciate the simple beauty of a direct and vigorous portrait. Every young photographer should be compelled to work for a time in a well-lighted studio without any of the usual paraphernalia for controlling the light.

Think of the advance in the science of photography since Hill's day. What would Hill have been able to do if he had lived to-day? One wonders whether the conditions under which Hill was compelled to work did not help him rather than hinder him. Hill was forced to work in a direct, powerful light, and to give long exposures. Is not a great deal of the beauty in his work due to these two factors? Is not much of the pictorial quality in his work due to the value of cast shadows? To-day we are all speed-chasers. But is there not something to be said for the long exposure? We decrease our lighting, soften down by screens, filter through muslin or cheese-cloth, until we have hardly any light at all; then, to make photographs in this semi-gloom, we must have the fastest lens procurable and the speediest sensitive material. We place our sitters in semi-darkness, which makes the pupils of their eyes dilate, and we wonder that we get the photographic stare. I have come to the conclusion that the best portraits produced have been those made with comparatively long exposures. Between twenty and thirty years ago, Rembrandt lighting was in vogue, and it is being revived to-day in a somewhat different form and under a different name. In the old form, the sitter was photographed against the light, the profile telling practically as a white outline against the deep shadows. In this new "stunt," the face is softly lighted,

and then a direct beam of light is focused on the ear, nose, forehead, or cheek, and the result is anything but pleasing. The pictures are striking and interesting, but such lighting becomes a fetish, and everybody uses it, with results that can only be degrading to pure, honest portraiture.

In my opinion, the most marked advance has been made in posing. There has been a distinct breakaway from the three or four conventional poses that served for every type of sitter twenty or thirty years ago. Photographers are not now afraid to cut out the text-book rules. Men are not made to appear as if their backbones were petrified, and women to look as if their necks were made of rubber. There is, however, still some reluctance to tackle the full-length figure, and a shyness about showing the hands in the portrait. The photographer is afraid, and plays for safety. Every photographer who has a really sound understanding of characteristic portraiture knows that the hands are very valuable in helping to portray character.

There are a few indications that are not quite so hopeful. One is tone or, I should say, the lack of tone. If you take out twenty photographers from those who are practising photography in this country, you have six thousand left who have never grasped the meaning of tone or values. There is room for a great deal of education in this direction. If a picture is out of tone, it is a failure. You have all seen hundreds of striking photographs ruined by false values, portraits with some part of the face or gown, or with some accessory, shrieking out like an instrument out of tune in an orchestra. Study the old masters if you want to get an idea of tone—Velasquez, Rembrandt and Raeburn.

Then there is a lack of versatility. One leading photographer may make a very successful portrait in a high key. Because this is successful, other photographers all over the country say that that is the fashion they must go in for; and when somebody else makes an equally successful portrait in a low key, the fashion veers around in that direction. Photographers will not think out poses and lighting for themselves. Neither high-key nor low-key work will suit all subjects. Look at Raeburn's portraits of men—strong lights, pronounced lines, definite shadows. Then look at his portraits of children, soft lighting, not yet settled down into shapes, suggesting the spirit of childhood; and his portraits of women, comparatively strong lights, but not so strong as in the men, the outlines not very definite, but more decorative. Raeburn adapts his style of lighting to his subject. As in lighting, so in posing, every sitter should be a new problem. So, too, in everything else, mounting, working in the background on vignetted portraits, and so on. When photographers begin to think for themselves and study character, they will do better. It is good to go periodically to the public galleries and receive ideas and inspiration. This is far better than learning a number of dodges and committing to memory certain formule.

Mr. Bell then showed a collection of portraits in the form of lantern-slides, including examples of the work of Hugo van Wadenoyen, Herbert Lambert, Swan Watson, William Crooke, Craig Annan, Angus Basil, R. N. Speaight, Marcus Adams, and workers in Canada, United States, France, Spain, Denmark, Switzerland, and by Perscheid in Berlin.—*Lecture given before the Royal Photographic Society.*



SOME of us still consider it quite an ordeal to have our photographs taken professionally, but what should we have said had our experience been that of one of the first victims? Imagine the photographer calmly painting your face white, while he informed you that the flesh did not reflect sufficient light to affect the chemicals on his photographic plate. Even that trial would sink into insignificance when you were boldly informed that you must sit perfectly still for about twenty minutes. The tormentor was merciful enough to allow the sitter to keep his or her eyes closed. Indeed this was a necessity, for the full sunlight was to be reflected onto the face. The photographer seems to have had some thought of his patient's comfort, for he passed the sunlight through a glass tank containing a

solution of blue-stone to absorb the heat rays. During the twenty minutes—it would seem like hours—through which the painted subject sat motionless, the photographer seems to have busied himself arranging that any white part of the dress did not remain too long exposed to the light. For instance, his instructions were: "A person dressed in a black coat and open waistcoat of the same color must put on a temporary front of a drab or flesh color, or, by the time that his face and the fine shadows of his woollen clothing are evolved, his shirt will be solarised, and be blue, or even black, with a halo around it."

If we picture the poor sitter with white face and closed eyes, we cannot imagine that the resulting picture would be a "speaking likeness."

CHARLES R. GIBSON.



HONORABLE MENTION — BRIDGES COMPETITION

THE PARK BRIDGE

A. DAWES DU BOIS



EDITORIAL



September

THE coming of September, the turning-point of the season, is something to be eagerly anticipated each year and its beauty remembered. The pen-pictures of the poet can be duplicated by the Autochromist many times over during this month. The variety and richness of the scene is virtually unlimited. There is beauty everywhere, as if nature were under a spell of enchantment, and the foliage of the trees is at its highest development of color and brilliancy. Few thoughtful persons can come into close contact with the forests and pastures at this time, when the leaves and grasses are changing, who do not even take a new direction in their thoughts and feelings, and even those who cannot express themselves are aware of sensations that are inspiring and helpful. It is the message of the immortality of the soul. The tree does not die when its leaves fall, but begins to prepare itself for another year's mission.

Perpetuating Useful Hints

HOW often has the careful observer not noticed a marked difference in the efficiency of a new clerk or salesman who, having superseded one of exceptional ability, has proved to be a great disappointment. Of course, the holder of an executive position is supposed to be at least familiar with the duties he has been elected or engaged to perform. From personal observation and study, if not from actual experience, he will have learned much that is going to be valuable to him in his new post of activity, in addition to the instructions he receives from his superior; but unless he shows an eagerness to increase his stock of knowledge and discharge his duties in an exemplary manner, he will not make a name for himself. It matters not whether the incumbent fills a low or a high position of activity. It is simply a question of efficiency—the quality of service rendered. He is fortunate, indeed, if his predecessor—he who filled the position so brilliantly before him—is thoughtful enough to impart to him certain useful hints acquired during his own term of office, enabling him to render distinguished service to his club and give it an

enviable reputation. On the other hand, it happens only too frequently that a retiring official neglects to render this friendly service to the succeeding incumbent, although he is not obliged to do so. What may appear to be merely neglect or indifference may really be selfishness, if not actually a feeling akin to jealousy. Happily such cases are rare, for the general tendency among well-ordered minds is to be generous and helpful. An example of this fine trait came to the personal attention of the Editor, recently, as he lingered near the sales-counter of a local photo-supply store. The former highly efficient head salesman had accepted a position that took him out of doors a large part of the time—a change made necessary by the state of his health. His successor was an experienced photo-salesman, but not familiar with the ways of the house, nor with the peculiarities of some of its most valuable customers. The former salesman, on his own volition, has made frequent visits to his successor, imparting to him all such information, and will continue this course of friendly advice just so long as it may be expedient.

Another instance is recalled—one that is filled at least with pleasing possibilities. A flourishing camera club, which the Editor has in mind, recently lost the services of its regular secretary—a man of remarkable energy and resourcefulness. The present incumbent appears to be equally zealous, but is lacking in several important essentials and without a prospect of immediate improvement. The two men ought to get together, the former secretary transmitting to his successor all the details of the office together with every useful hint and wrinkle that contributed to his own success and made his retirement a source of general regret. Indeed, such a transmission of practical knowledge should be not only voluntary, but the entire store of information be handed down from one incumbent to the next—in other words, perpetuated.



It may not be too much to hope that artist-photographers will be considerate enough to pass on to others, as was done to them, certain little dodges which make for successful portraiture—the proper control of the sitter's lips and the direction of the eyes.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition
Wolfeboro, New Hampshire, U.S.A.

Prizes

First Prize: Value \$10.00.
Second Prize: Value \$5.00.
Third Prize: Value \$3.00.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced. Prints on rough or linen-finish surface and sepias are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail. All prints should be mounted on stiff boards.

3. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. **Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins; but in every case, prints should be protected by strong, stiff boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Advanced Competition—Marines Closed June 30, 1922

First Prize: William S. Davis.
Second Prize: Fred Aberle.
Third Prize: F. W. G. Moebus.

Honorable Mention: W. S. Baldwin, F. E. Bronson, Dr. Geo. E. Blackham, Cornelia Clark, Charles Clayton, Jr., Allen Fraser, Mercedes Gillies, O. R. Gregory, Wm. B. Inluch, J. Thornton Johnston, Dr. K. Koike, Charles Lederle, Alexander Murray, Kenneth D. Smith.

Subjects for Competition—1922

"Parks." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.

Subjects for Competition—1923

"Home-Portraits." Closes January 31.
"Miscellaneous." Closes February 28.
"Child-Studies." Closes March 31.
"Still-Life." Closes April 30.
"Bridges." Closes May 31.
"Marines." Closes June 30.
"Landscapes with Figures." Closes July 31.
"Summer-Sports." Closes August 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Should Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, are inclined to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know?



THE LONE WATCHER

WILLIAM S. DAVIS

FIRST PRIZE — MARINES

Cloud-negatives

FORMERLY, it was easy to purchase cloud-negatives in any size on either glass or film, says *The British Journal*. These are no longer listed by the dealers, and it is to be presumed that, as articles of commerce, they have ceased to exist. This is, perhaps, not altogether to be regretted, as it was sometimes rather embarrassing for an exhibitor to find his cloud-effect duplicated in one or more other pictures in the same show. A considerable amount of judgment has to be exercised in the making of cloud-negatives for printing-in, as distinguished from those in which the cloud-effect is in itself the point of interest, as the latter class includes bold, stormy skies, sunsets and sunrises, and for the former the more common-place, but still beautiful, cumulus or cirrus forms are more generally suitable.

As the forms of these clouds vary during the course of the day, it is desirable to mark upon each negative the hour at which it was made. Although it does not

matter in ordinary commercial work whether a mid-day sky is printed into an evening negative, so long as the general effect is good, critics may not be so merciful if the same thing is done in an avowedly pictorial composition. For important work it is even desirable to photograph the cloud and landscape from the same spot at the same time of day; but, of course, not necessarily on the same day, as the conditions are often not favorable for so doing. Although clouds may be obtained sometimes upon the same negative as the landscape subject, it is not well to rely on doing so very often, as it is next to impossible to obtain the necessary contrast in the sky if there is strong contrast in the foreground. Graduated color-screens have been tried to compensate for this disparity; but they are obviously of limited application, as the gradation must extend across the entire subject, irrespective of buildings or trees.

Fairly good cloud-negatives may be obtained upon slow, ordinary plates without a filter; but the occasions upon which this is possible are so few that it is well



FISHERMEN

FRED ABERLE

SECOND PRIZE — MARINES

always to use color-sensitive plates with a suitable filter. A deep yellow filter is usually not the most suitable. Even a deep blue sky does not give the impression of black to the eye, which is the result of the total elimination of blue resulting from too deep a filter. Exposure may present some difficulties at first; but a modification of the strip-test, as used in bromide-printing, will help greatly in this direction. As clouds are constantly moving, it is impossible to employ the ordinary method of drawing the slide out in sections; but it is possible to arrange strips of card to partially mask the plate so that, let us say, three quite independent exposures can be made upon the same plate, giving double the time at each change. This test may be made at home; and, if possible, the time taken to obtain a full tint upon a Watkins or Wynne meter should be noted, the meter being pointed to the sky. Subsequently, the exposure may be increased or diminished in proportion to the meter-time, stop, plate and filter being unaltered.

It might not be thought that halation would cause trouble in this class of work; but it will be found that much better tone-values will be obtained upon a backed plate or a film than upon an unbacked one. Films are particularly suitable for cloud-work, as they can be printed from either side, so that the clouds may be lighted from the same direction as the landscape. The camera should not be pointed up to the sky, but should be kept level and the front raised, so that the clouds appear as they would if made with the landscape. Any keen observer of nature would detect the error of printing clouds situated near the zenith into a position near the horizon. In order to see readily which is the top of the negative a small portion of the view should be

included upon the plate. Assistants have been known to print in clouds standing upon their ends, though this is less likely to occur than printing them upside-down.

It has always been customary to make cloud-negatives very thin, and there is no disadvantage in doing so for printing-out processes. With bromide-printing and enlarging, on the other hand, it is better to aim at greater density, so that there is not such a great difference between the two exposures. If the view-negative requires twenty seconds in the enlarger, and the cloud only two or three, a very slight error in exposure of the latter will spoil the print, but, if the sky required approximately the same exposure, the percentage of error would be much less.

As a general rule, it will be found easier and more expeditious to put in skies upon bromide-prints by means of the enlarger, even if the prints are the same size as the negative. This course allows of the cloud being enlarged or reduced to any degree, or of being used on either side. Many failures result from excess of carelessness, that is to say, a mask which exactly follows the outline of the view is cut and held fairly close to the paper. This almost always results in a very perceptible band—either lighter or darker than the sky—which shows at the junction, and trees often show white paper between the boughs. A roughly-cut mask, kept well in motion, and allowing a slight overlap, will, as a rule, be found quite satisfactory.

Some photographers trust to luck when giving half-second exposures with a camera in the hand; others trust a tripod. The former curse their luck; the latter forget to bless the tripod.

A. SEAMON STER.



AT SEA

F. W. G. MOEBUS

THIRD PRIZE—MARINES

Would-be Substitutes for Safranin

THE great success of the safranin-process for desensitising photographic plates when developing them has given rise to numerous recommendations of substitutes for which advantages are claimed which it is said the pheno-safranin does not possess. For instance, a certain Herr Finger, in an address on the safranin-process before the Photographic Society of Plauen (Saxony), objected to the red stain made on the fingers by the safranin and on that account had sought out other coloring materials and he recommended instead of the safranin the use of filter-green or corallin, which he said had the same action without staining the fingers!

I have compared rosol-acid as well as rapid filter-green in their practical working, with pheno-safranin and must say that with yellow light under the same conditions the safranin gave faultlessly clear negatives, but with the others the plates were completely fogged. As substitutes for the safranin, therefore, they cannot be considered.

Recently also, Messrs. Lumiere and Seyewetz recommended aurantia as a substitute, which is in no way suitable. Highly sensitive plates were bathed in the

pheno-safranin and in perfectly pure aurantia (1 to 20,000) and then tested with uncolored control plates. Although these showed 76 degrees of sensitiveness the aurantia-colored plate indicated 66 degrees and the pheno-safranin 48 degrees. According to this, there was much feebler desensitising by the aurantia in comparison with the safranin. With the former, the plates were completely fogged but with the safranin they came out absolutely clear. Consequently, the aurantia does not offer an adequate substitute for the safranin.—*Lüppo-Cramer in Photographische Rundschau.*

Reducing Negatives with Mercuric Nitrate

A. STEIGMANN reports in *Photographische Industrie* that he has found mercuric nitrate very useful to reduce negatives, its action being very similar to that of Farmer's solution. The nitrate of mercury forms an energetic solvent of silver when acidified with nitric acid; generally a $\frac{1}{2}$ per cent. solution is sufficient. If the reduction is too rapid, dilute the solution with water; if too slow, add more of the nitrate. If a slow and partial reduction is desired, a cold, saturated solution of sulphate of mercury can be used.



SUBJECT FOR NEXT COMPETITION
ADVANCED WORKERS



MEMORIAL ARCH

PHILIP B. WALLACE

EXAMPLE OF INTERPRETATION

Advanced Competition—Architectural Subjects. Closes October 31, 1922

WE thought that our readers might like to consider some other subject than architecture this year. We wrote to a number and discovered that the majority were very much in favor of making no change whatever. The consensus of opinion seemed to be that the consideration of architecture was a welcome subject and that it served to test the camerist's skill as no other competition appeared to do. Hence, we offer it again and hope that those who enjoy the pictorial study of architecture will send in their very best prints.

It is very satisfying and encouraging to note the *real* interest that is shown in our monthly competitions. As I have said elsewhere, the Editors of PHOTO-ETC

MAGAZINE conduct these competitions with the desire to encourage and to stimulate workers to make the most of the art and science of photography. We are eager to help every reader to become successful, photographically. To that end, we maintain high standards and, at times, we may appear to be hypercritical; but we are making a sincere effort to convince the amateur and professional photographer that only the best thought, effort and workmanship will enable him to obtain the greatest benefit from photography.

In all photography, there is no subject that requires such attention to light and shade, to point of view and to treatment, as architectural photography. Moreover, there is a certain amount of responsibility associated with architectural photography in the sense that the camerist is trying to perpetuate pictorially

some of the highest intellectual and beautiful expressions of the architect. A beautiful building—and there are many in nearly every city and town—is as much a work of art as a beautiful painting or photograph; and, when the worker attempts to photograph such a building, let him not forget to retain every line as the architect intended it should be—otherwise, the picture will become but a record-photograph.

In this competition, photographs of domestic, church, commercial and government buildings are acceptable. The purpose is to have workers confine themselves to subjects that represent architecture. An old farmhouse may prove to be an excellent example of Colonial architecture and thus would be welcome to the jury. Buildings in towns and villages are as promising subjects as those in large cities. A Colonial town-hall or a library in a New England village may be made as picturesque as an old Spanish monastery in California. The tremendous sky-scrapers of New York City are a constant invitation, by day and by night, to the intelligent worker. My object in mentioning these subjects, indiscriminately, is to convey the idea that any building that possesses pronounced architectural interest and beauty is a suitable subject for this competition. The point to remember is, to select some bit of architecture that makes a strong appeal and to photograph that in preference to another bit that is apparently lifeless and cold.

One of the most important preliminary steps in the photography of all architectural subjects is a thorough study of every possible point of view. There will always be one point from which the best result may be obtained. As soon as this has been determined, a careful study of light and shade should be made. After many unsuccessful attempts "to get things just right", the camerist may find that by night his subject becomes alive with the very effect that he cannot obtain by daylight. Often, an artfully concealed street-lamp works wonders. In some cases, light from within the building enables the camerist to obtain the desired effect. Whenever possible, it is well to make the picture tell a story. Moreover, the worker who can get away from a purely commercial reproduction is to be praised. Of course, many subjects are without even the semblance of a story; but there are likewise many that combine architectural beauty with artistic and spiritual feeling. There is an old adage that is particularly applicable to architectural photography: "Do not bite off more than you can chew." If a beautiful façade is preferable to the picture of an entire building—photograph the façade and let another camerist attempt the entire building. There are many buildings that are so situated that it is virtually impossible to include their entire length or breadth on the plate or film. Even by using a wide-angle lens, the desired result is not to be obtained. In such cases, the intelligent worker will confine himself to a part of the building that will lend itself to the best advantage.

Nothing in architecture is more beautiful than a high tower, either standing alone or as part of a building. At the same time, there are few more difficult subjects to photograph. Unless the camera is equipped with a rising-and-falling front, or a swing-back, it may be well to seek other subjects, for a tower that is not plumb, or one that is distorted, will be rejected at once by the jury. In some cases, the camerist may be fortunate enough to obtain the desired result at some distance from the subject by using a telephoto-attachment. The worker should always remember that the plate or film must be absolutely parallel to the upright lines of the building to be photographed, otherwise the subject will appear larger at

the top or bottom or vice versa—according to the direction of the camera, upward or downward. Attention to this is advisable also when photographing from a housetop or a window. The use of wide-angle lenses is often necessary, although their use should be curtailed as much as possible in order to avoid distorted perspective. It is preferable to get far enough away to make the use of a wide-angle lens unnecessary. True enough, this is not always possible. However, it may be seen readily that architectural photography involves much technical and artistic skill; and that personal initiative is no small factor to obtain results.

Perhaps in no branch of photography is the question of exposure of greater importance than it is with regard to making pictures of buildings. Experienced workers know that a white marble building requires less exposure than one made of red sandstone, even though both buildings are lighted by bright sunlight. Likewise, it should be remembered that deep shadows underneath porticos and doorways require more exposure, despite the fact that the sun may be shining brightly outside. The old maxim to expose for the shadows is very much in force with regard to architectural photography. In all cases, careful attention should be given to the material of which a building is constructed, particularly with regard to the color of the entrances, façades, porticos and other parts of the building that differ in color from the main building. Since colors may be photographed to greater or lesser advantage, it may be seen that a white building with green trimmings would require different treatment from a red building with white trimmings. These little points may appear to be superfluous; but successful architectural photography takes these very details into strict account. Needless to say, a reliable exposure-meter, color-screen, tripod and orthochromatic plates and films are essential to success. Of course, excellent photographs are made without these accessories; but the chances of success are better if the camerist is equipped properly.

There is another point with regard to architectural photography that is sometimes overlooked. It is not strictly photographic, but it is very interesting and profitable, nevertheless. I refer to the educational value of this branch of photography. Unless the worker positively sets his mind against it, he is virtually compelled to assimilate historical and other information of value. It does not seem conceivable that a camerist could photograph a beautiful public building without inquiring a little into its history. For this reason alone, the present competition may be used to great advantage by amateur and professional photographers who may wish to combine the study of history and the mastery of architectural photography. This suggestion was accepted last year by several workers, very much to their pleasure and benefit. In fact, one camerist used the pictures and information obtained for an article that brought him a handsome financial return.

As I have said so many times, it is the successful worker that gets the most out of photography. To make a success of it, there must be plenty of hard work and enthusiasm on the part of the camerist. Take my word for it, it pays to give one's very best. The returns in awards, honors and fame will take care of themselves. Above all, let the picture be simple and truthful. There has been much striving for effect at the expense of simplicity. Let us remember a famous art-critic's definition of a great picture—one that both a trained connoisseur and a humble peasant can understand and enjoy.

A. H. B.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition
Wolfeboro, New Hampshire, U.S.A.



Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given *Honorable Mention*.

Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. Or, in case of dual authorship, names of both should be given. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface paper and sepias are not suitable for reproduction, and should be accompanied by smooth prints that have the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or *Honorable Mention* become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for 2-cent stamp. **Be sure to state on the back of every print for what contest it is intended.**

8. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins, but in every case, prints should be protected by strong, **stiff** boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

Awards—Beginners' Competition

Closed June 30, 1922

First Prize: Bernard M. Stern.

Second Prize: Melvin C. Parrish.

Honorable Mention: Charles Ditchfield, Miss G. Finnie, John James Griffiths, Stephen J. Palicker, Sterling S. Smith, Jr., James G. Tannahill.



Do Not Neglect Negatives and Prints

It is said that experience is the best teacher, and I believe in the truth of this assertion. Obviously, experience plays a very important part in all our activities, and photography is no exception. Perhaps, practical knowledge is more important to the camerist than to some others, for the reason that errors in photography are apt to be costly, financially and sentimentally. A ruined negative is gone forever; but another print, lantern-slide or enlargement may be made, provided that the *negative* is good and properly protected. Hence, the value of practical experience in making the negative. However, in this little article I wish to emphasise the importance of preserving the negative and likewise the prints and enlargements that may be made from the negative.

At this time of the year, the crop of travel- or vacation-pictures is being harvested, and I cannot call attention too strongly to the importance of going about this work carefully and systematically. Let us take the average beginner or vacationist as an example. He goes to the mountains or to the seashore for two or three weeks. Upon his arrival, he proceeds to make pictures; and the moment that he has completed his first roll of exposures, he hurries to the nearest local photo-finisher. Within a few days, he receives the negatives and prints, carries them about to show his friends and then slips them into an old envelope and, for the time being, forgets all about them. So it goes on until the end of his vacation. Then, as he packs his bag hurriedly he literally throws the collection of negatives and prints into one corner of it. When he arrives home, he is very likely to take them out and, for lack of a better place, to put them in some unused drawer in his desk. Several months later, one of his vacation-friends invites him out to recall their vacation-days together, and asks him to be sure to bring along the pictures he made. Then his troubles begin. Where did he put those pictures, anyway? He searches high and low. Perhaps he finds them and perhaps he does not. At any rate, he has been put to considerable annoyance, and all of it was needless. If he had only taken care of the negatives and prints in the first place. Suppose that our vacationist had made a trip to Europe and had taken no better care of his pictures!

Were I to go on a trip or on a vacation, I should provide myself with any one of a number of good negative-albums which are properly indexed. Then, as the negatives and prints come along, I should index them carefully, with titles and data, and put *both* in the negative-album until I arrived home. As soon as



JAPANESE CHINA

BERNARD M. STERN

FIRST PRIZE — BEGINNERS' COMPETITION

possible afterwards. I should obtain a good photo-album and make a business of putting all the prints in the album in chronological order and properly titled. That done, I should decide upon *one place* to keep the negative-album where it might be found at a moment's notice. With this done, there would be no trouble to find and to show my vacation-pictures whenever I wished to do so.

It may not be out of place to remind my readers that good vacation-pictures, especially those of a trip in this country or in Europe, make excellent material for enlargements and lantern-slides. Whenever possible, these should be made by the camerist himself, because he will find great pleasure in the work. There is no more pleasant way to entertain friends than with a little informal illustrated account of summer-days afield with a camera. Modern projection-outfits are so compact, dependable and moderate in price that the amateur photographer will find his pleasure in camera-work increased one hundred per cent. if he learns to make good lantern-slides.

Then, too, the matter of attractive enlargements will prove to be a source of increasing interest and delight. The number of first-class enlarging-outfits now to be obtained makes it virtually impossible for the intelligent camerist to go wrong. He can make enlargements by daylight or by artificial light, as he chooses. Often, an enlargement will bring out a picture and enable the beholder to see and to appreciate its real beauty. Then, again, what better wedding or Christmas-gift could one find to give a friend? Such pictures are not to be bought; and there is an individuality about them that adds greatly to their value. Also, for home-decoration, the enlargement is most attractive and appropriate. Incidentally, there is a demand for beautiful enlargements and an opportunity for profitable camera-work. Many magazines and book-publishers are eager to purchase good pictures suited to their requirements.

Therefore, it should be apparent that there are a number of very good reasons why the camerist should take care of every negative and print that he makes. There is no greater source of enjoyment than a well-arranged collection of kodak prints or a set of lantern-slides. As the collection increases from year to year, it comprises a veritable pictorial record of a man's life. Then, too, as time moves on relentlessly, many of the pictures will become priceless, for they will be all that we have to remember the face of a loved one. Again, in certain cases, there may be a historical value to a picture at the end of a period of years. Changes are occurring constantly in our cities and towns, and old landmarks are disappearing rapidly. By all means, let the beginner, and every camerist, see to it that he does not neglect to take good care of his negatives and prints; for, in the years to come, they may have a value that he never dreamed of at the time of making the exposure.

A. H. B.



To Participants in Our Competitions

THE purpose of the Advanced and Beginners' Competitions is to be of service to our readers. By participating in these competitions the camerist improves his photographic knowledge, learns to work systematically and has something to strive for. However, the Editors of PHOTO-ERA MAGAZINE are virtually helpless to render the maximum service when participants fail to obey the rules. That is, when they fail to furnish complete data and do not indicate for which competition a particular print is intended. With the best intentions, we cannot take the time to write to those who fail to furnish us with the information that will help us to serve them to advantage. We shall appreciate the co-operation of our readers in this important matter of having their pictures properly marked.



MORNING-MIST ON THE SANGAMON

MELVIN C. PARRISH

SECOND PRIZE — BEGINNERS' COMPETITION

Landscape-views with Strong Contrasts

In landscape-subjects there are often very strong contrasts of light and shadow which seem to be intensified in the photograph. Such subjects require to be carefully developed so as not to further increase the contrasts and render the negative incorrigible. To be sure, the negative can be treated afterwards with an appropriate reducer; but it is much preferable to control the development in the first place so that the negative will come out harmoniously and later require as little "doctoring" as possible. In our photographic excursions we will often have to take account of unfavorable lighting which after a little waiting will give better conditions. If, however, a different hour cannot be taken and a more distant point of view is available, it will be better to study the most suitable light from various positions; or, perhaps, wait for a passing shower which will present the subject with moderated contrasts. This old warning is often neglected by beginners, especially in mountainous regions where difficulties in making foreground and distance harmonise will often present themselves. If to this is added an ill-considered treatment, the view is rendered untrue to nature and the leading lines of the landscape are confused or reproduced only imperfectly.

Photographische Rundschau.

Counting Seconds

WHEN making time exposures it is often desirable to count seconds without consulting a watch, says a writer in *Kodakery*. It is difficult to time a one-second or a two-second exposure with a watch because the dial that records seconds on most watches is very small, and in poor light the markings that indicate seconds cannot be seen distinctly.

An easy method to count seconds, that is sufficiently accurate for photographic purposes, is to repeat a phrase that it takes one second to pronounce. Most people will require one second of time to pronounce the

words, "one hundred and one," as rapidly as clear enunciation will permit. The last word of the sentence should always indicate the number of seconds that have been counted. Six seconds, for instance, should be counted: "one hundred and one, one hundred and two, one hundred and three, one hundred and four, one hundred and five, one hundred and six."

Many who use this method can count from thirty to sixty seconds without varying more than one or two seconds from the time recorded by a watch. An error of two seconds in a time-exposure that is intended to be more than five seconds long can scarcely be detected in the negative. Although this is a simple and reasonably accurate way of counting seconds for short time-exposures, long time-exposures should be timed with a watch, whenever possible.

An Unusually Exact Test for Hypo

AN original method of using a weak solution of eosin to color the fixing-bath as a means of verifying the complete washing-out of the hypo from paper-prints has been mentioned. In one of our contemporaries is described a method of treating both prints and negatives so as to give them the greatest possible durability by the total elimination of the hypo where, on account of special importance or impossibility of replacing, special care has to be taken, both good and extraordinarily exact verification can be had. The method can, at the same time, do good service in washing both positive and negative plates where no running water can be obtained and the "beloved" and economical washing from tray to tray has to be followed. It is now possible to detect the one-millionth part of hypo in the last washing-water if some of the latter is poured into a test-tube and a few drops of a saturated solution of chloride of mercury added with a medicine-dropper. Even with the infinitesimal quantity of hypo mentioned, a greenish-yellow precipitate is shown which in the case of a lesser trace or total absence will not appear.



THE LUCID

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



A New Sensitising-Method for Chromated Papers

THE working of pigment-paper would have become more general long ago, as well as the gum-process, with ready-prepared paper, and would have found a much wider circle of users had it not been for the troublesome sensitising in the chrome-bath, the drying under special conditions and, lastly and chiefly, the lack of durability of the prepared paper.

Prof. Namias of Milan, Italy, it is true, many years ago, was able to correct the latter evil—the lack of durability of the pigment-paper—by adding an equal quantity of sodium citrate to the potassium or sodium bichromate bath as was used of the latter. By this means the paper became less sensitive to slow drying and a week's durability was gained, and besides this an easier solubility of the unexposed colored gelatine in warm water. But the durability of the paper was not yet sufficient to allow it to be delivered to dealers direct from the factory to be sold to consumers.

Prof. Namias, having renewed his interest in this subject, has now found a method that seems to have achieved the desired object—the manufacture of a pigment-paper that will keep for a long time. In *Penrose's Annual* for 1921 there is an original treatise by the inventor, from which we take the following important points:

Upon experimental investigation it was found that the light-sensitiveness of chromated gelatine-paper decreased with the quantity of alkali, and on the other hand the durability of such paper was increased enormously. By the addition of suitable quantities of caustic alkalis or alkaline carbonates, the light-sensitiveness can be completely counteracted, because finally not the least trace of chromic oxide—superoxide of chromium—can be formed under the action of light.

According to Prof. Namias's view, by the use of neutral chromate with the addition of a small quantity of potash, or better caustic potash, the pigment-paper that is supplied with this alkaline chrome salt during manufacture is unlimitedly durable. Decisive tests are not before us, but the inventor believes, it is said, that the attainment of this object is in sight. Durable chromated paper for gum-printing, gelatine-paper for oil-prints and photo-lithographic processes will then become possible, and before applying the gelatine coloring-mixture or the pure gelatine the proper quantity of alkaline chromate solution can be added. The user of this durable chromated paper, but insensitive to light, has then to render it sensitive by a simple treatment neutralising the alkaline chrome salt more or less completely or changing it back to bichromate.

Namias sees for this purpose a dry treatment which would operate in such a way that the durable chromated paper will be suspended in a tightly-closing, wooden box in the bottom of which is placed a tray that contains acetic acid, the rising vapors of which will effect the change of the alkaline monochromate into a bichromate in about half an hour. Regarding this change, the experiments seem to be not yet concluded, since other methods, such as the use of citric acid in denatured alcohol, are also being tried.—*De. Atelier.*

A Substitute for Gold and Platinum

THE scarcity of the precious metals in Europe, which has practically prohibited their use for toning-baths, has led to the almost universal use of developing-papers, both by professional photographers and amateurs. This is true on account of their special advantages, their independence of daylight, their saving of time in printing and their easy adaptability to the quality of the negative, which have given them the preference over the printing-out papers. However, a disadvantage is found, in that, with them, artistic tones can be obtained only to a limited extent. What the professional man of cultivated taste prefers is a pure brown or one with a greenish tinge, preferred by copper-plate engravers. This latter tone has a fullness, depth and decidedness that give the shadows great transparency. These tones work on a white ground with an effectiveness that is specially restful and agreeable. Two novelties just put on the market by the *Mimosa Actien-gesellschaft* of Dresden, Germany, are intended to satisfy this desire. "Novum," the new *Mimosa* brown developer, gives—especially on Velotype paper, No. 29—at once upon developing the print, the above-mentioned fine engraving-tone, which can be varied from a deep black to a light reddish brown. No after-treatment is required. For after-toning of prints already made, the "Mimosa Skala Toner" is used. This toner gives on Velotype paper Nos. 1 and 6 a rich and extremely pleasing tone which, by a variable addition of potassium bromide, can be obtained with absolute certainty. It produces a new shade of color of notably artistic effect which will quickly give it acceptance in the leading studios and among serious amateurs. A special advantage of these two new products of the *Mimosa Actien-gesellschaft*, which are sold in cartridge-form, is their long-keeping qualities both in solid and prepared form. The "Novum" developer will even bear a 24-hour exposure in an open tray, while the "Skala" keeps indefinitely. The best proof of the good quality of the *Mimosa* products is the award of a gold medal for Velotype paper at the Weimar Exposition in July, 1921.

Photographische Industrie.

Barium-Chloride as Hypo-Eliminator

BASED on his opinion on the hypothesis that by the use of barium-chloride, as addition to the wash-water, the hypo contained in it and any traces of it that remain in the paper or coating are so combined that the sodium will unite with the chloride, forming sodium chloride—common salt and the barium with the sulphate forming barium sulphate—two photographically innocuous salts. Mr. Byron in *Cam. et. Catt* advises the use of barium chloride as eliminator of the hypo, especially in the hasty preparation of paper-prints. The author washes the prints for one or two minutes only and then immerses them for three minutes in a bath of half an ounce of barium chloride dissolved in ten ounces of water. The prints are then raised off and brushed over with a wad of cotton and dried. The barium-chloride bath can be used repeat times.



OUR CONTRIBUTING CRITICS



THE APPROACHING STORM

GEO. L. ROHDENBURG

YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the last day of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

It is evident that Mr. True did not make this picture with an eye to the pictorial, but rather as a record of the mountain, as the small stop was sure to make for needle sharpness and not as the eye sees the mountain. The focusing lends strength to this idea, for it is sharp on the mountain, but the foreground is out of focus.

The main trouble is that there are too many attractions, with none of them being of supreme importance. It would appear that the lake would have made a real picture, with the wooded shore and mountain as accessories, especially with clouds around the mountain. There are several styles of composition in this print, which also divide the interest. There is the beautiful "S" curve of the foreground shore-line; the "L" style of the middle-distance shore-line; and the trees on the left. Unity is lacking.

There are conditions here for almost any kind of beautiful picture; but Mr. True was fortunate enough

to select the time and place to record them. Many exposures could be made at this lovely place with advantage and without waste.

J. E. CARSON.

It is a splendid view of the mountain; but, pictorially, would be improved by cutting off one-half inch from the bottom. Also, by bringing more towards the center the group of tall trees, moving it over to the left when making the picture. A canoe or rowboat on the water, midway between the log and the point, where the further water's edge strikes the right-hand side of the print, would help to destroy the blankness in the foreground. A few clouds, either printed in or made, if possible, with the view, would destroy the baldness of the sky, and soften the lines which chiefly cut across the print. A little taken off the right side, before the lines of mountain and forest rise so high, would also help to make the two peaks dominate the view.

ARTHUR GILLAM.

THE principal fault to be found with this picture is one that is the result of unsatisfactory light and



THE PICTURE CRITICISED THIS MONTH

atmospheric conditions. There is a complete lack of atmosphere and the distant mountain looks very little further than the middle distance. The tones of the foreground trees and distant shore are the same and the general impression made by this picture is that of monotony. The water also looks flat and unlike real water. The sky, unfortunately, is too blank. A few clouds would have improved the value of this very much. It is possible that no other opportunity was available to make this picture. The viewpoint was well chosen and the foreground is about right for a picture of this type. As it is, I should trim about one-half inch from the top and the same from the right.

W. H. POTE.

The picture, "Moat Mountain", is a very good one as a whole, although the trees at the left have a tendency to draw the eye away from the mountain itself. To trim about three-fourths of an inch from the left side of the print will cut out the trees and leave the mountain as the main attraction. Then, the mountain appears almost in the center of the print from top to bottom, which might be improved by trimming one-half inch from the top of the print. The change of position could be made by trimming from the bottom of the print; but it would mean the loss of the distant effect which the foreground—even though a lake—aids in producing.

A. L. OVERTON.

Mr. TRUE's picture of a scene familiar to North Conway visitors is an attractive record. It lacks unity of parts, for one thing. The wide strip of woods at the foot of the mountain stretches across the entire picture and rests on the top of what appears to be—but from the data is *not*—a surface of ice. The lake lacks char-

acter and correct color-values. The shore-line—in fact, all the outlines are too sharply defined for a pictorial photograph, as naturally would be the case in using so small a stop as $F/22$. The monotonously white sky is another bad feature. Mr. True doubtless got what he wanted; but to satisfy me, for one, the exposure should be made late in the afternoon, with mellow lighting, long shadows and a low tone to the surface of the lake. These effects might have tended to obviate the present inartistic contrasts and to produce more harmony and unity in the result.

W. A. F.



Brown Toning of Bromide Prints

Toxing bromide and chloro-bromide prints by the following method appears to be very little known; but deserves to be remembered, as the results are superior to those produced by the methods commonly used. The deep, warm-brown tones of prints treated by this method resemble those of heliogravures and do not present the yellowish halftones given by those treated with sodium sulphide alone. The stability of the prints seems to be perfect, as some kept for months under very unfavorable conditions show no signs of deterioration.

Place the print to be toned in a 1 to 1,000 solution of sodium sulphide; it will show no alteration; but the final result will be better. Wash briefly, and bleach in the following bath: water 100 parts, potassium ferricyanide 2 parts, potassium bromide 3 parts. Wash well to remove the yellow tint received in the last bath and tone at once in water 1,000 parts, sodium sulphide 15 parts, and sulpho-antimoniate of sodium 15 parts, known in commerce as Schlipf's salt. Wash well and dry immediately.—*Photo-Review*.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



For perfection and beauty of technique—attained by a combination of ideal conditions controlled by a master hand—I commend all appreciative PHOTO-ERA readers to the work of Kenneth Hartley. An effort has been made to reproduce in a fairly adequate manner a number of prints which illustrate the highly developed executive skill of this master-photographer of the mountain-scenery of Colorado. It is about thirty-five years ago that I wrote an article on architectural photography for *Anthony's Annual Bulletin*, the accompanying illustrations of the Old State House, Boston, showing a remarkable softness and delicacy of delineation which I ascribed to the lens I employed, viz., a Voigtlander Wide Angle Euryscope. This lens was analysed, shortly after it had made its appearance in this country, by an eminent American physicist, who pronounced it one of the finest lenses that was ever constructed. He was right. The only lens of its character, its power to produce an enormous wealth of detail—no wiry sharpness—with a resulting softness and delicacy of definition, has been equaled in my experience by only one other lens, Darlot's Symmetrical Anastigmat, issued a few years later. The difference in result between these two types of lenses and others, it seemed to me, was that which exists between a very finely executed copper-plate engraving and an ordinary (not inferior) steel-engraving. In examining the exquisite workmanship of Mr. Hartley's prints, I am inclined to attribute it largely to the lens he used. Just what it is that he employed, he does not say. The experienced photo-worker knows that "any old, second-hand lens picked up for a song in some pawn-shop" may be a jewel; so Mr. Hartley's reference to his lens, as belonging in the category of "any old lens", is teasingly unsatisfactory to the seeker after valuable tips. But the circumstance that he stops his "any old lens" down to F/40—and, perhaps, even smaller—may explain to these eager searchers one of the means to the creation of the beautiful quality of Mr. Hartley's pictures. Naturally, believers in straight-throughout photography will delight in viewing this unusually interesting series of pictures and acclaim the author as one of their brilliant exemplars. Let them go to it. Mr. Hartley deserves all the praise and credit they may shower on him—and more, besides.

The student in pictorial composition will experience much satisfaction in analysing these mountain-pictures from his point of view. They are, indeed, composed with sound artistic judgment. The masses of rock, snow and verdure are well placed, and the foundation of each picturesque arrangement is solid and secure. The unique formation of twisted limbs of spectre trees has been certainly well pictured by the artist. This example of a bygone age worthily merits the two places of honor in this issue.

Data: Front-cover and frontispiece; August, 3.30 P.M.; bright sun; 7½-inch lens; stop, F/32; K 3 ray-filter; 4 seconds; 5 x 7 Standard Ortho; pyro; Professional Cyko print. "GLADES FILLED WITH WILDFLOWERS", page 117; July; 9.30 A.M.; bright sun; 10-inch lens; stop, F/28; K 2 ray-filter; 2 seconds; same plate, developer and print. "SKY-POND", page 121; July; 3 P.M.; bright sun; 9-inch lens; stop, F/40; K 2

ray-filter; 3 seconds; same plate, developer and print, no available data for other pictures, except that same plate, developer and print were used.

The last time that I remember to have seen a picture by Louis A. Goetz in PHOTO-ERA was about twelve years ago, when his admirable view of a French fishing-boat, aground at low tide, caused considerable discussion as to whether it was going or at rest. No doubt many of our readers recall that extremely interesting topic. To-day, we are to pay our respects to an unusually attractive picture of a Venetian canal, page 124. The eye would rest on the sunlit domicile at the end of the visible section of the waterway, which, with the old-time balcony at the right and what appears to be a small gondola below, forms an interesting group of objects, but the brilliant reflection in the immediate foreground seems to be in a negative mood. Unfortunately there are no data.

The decorative portrait of an admirable motion-picture actress, page 125, represents a pleasing, restful pose and does credit to the well-known, imaginative style of the artist.

Alfred Cohen shows true artistic feeling in his pictures made in the Catskills. They are, as he suggests in his article, examples of the bountiful camera-material to be found in that locality.

I am glad to see reminders of one of my old stamping-grounds—the impressively beautiful valley of Waterville, N.H. Page 135. It abounds in grand scenery, whose picturesque beauty is enhanced by several streams, the largest of which is Mad River. The Granite State is blessed with a wealth and variety of natural scenery surpassed by no other state in the Union, but it is doubtful whether among its numerous, fascinating valleys there is one which in silent, impressive and inspiring grandeur—enclosed as it is by such stately mountains as Osceola, Tecumseh and Tripyramid—equals the Valley of Waterville. None, except he who has sojourned in that serenely attractive region, can appreciate my feeble effort to indicate its charms. Phil M. Riley's two views, however, are worthy suggestive and significant, although, in themselves, typically beautiful New Hampshire landscapes. No data except stop F/11 and 1/25 second exposure, in each case.

Waterville, N.H., is about twenty-five miles south-east from Mt. Washington, White Mountains, and some fifteen miles from Campton, the nearest railway station (Boston & Maine).

As stated previously, the monthly competition, "Bridges", last May, was an exceptionally successful one. The jury found it difficult to determine the three prizes. Naturally, there were many which ought to have received third prize, and one of these was preëminently the "Park Bridge", by A. Dawes DuBois, page 144. Its composition was deemed exceedingly beautiful—spontaneous, harmonious, restful. The bridge is placed with fine judgment near the upper right corner in the picture-space, thus affording room for an attractive foreground. The structural foundation of the picture is the beginning of a graceful line sweeping towards the left, upwards and then to the right culminating in the principal object of pictorial interest. The lighting

is soft but adequate, the atmospheric quality superb and the execution, throughout, masterful.

Data: Made in Lincoln Park, Springfield, Illinois; April 29; 4 P.M.; clear light; 5 x 7 Cycle Graphic; no lens but home-made 0.5 mm. pinhole about 10 inches from plate; 90 seconds; 5 x 7 Set 26 X; Tabloid Rytol; contact-print. Azo No. 2.

Advanced Workers' Competition

ALTHOUGH the present competition yielded a large number of finely interpreted subjects it may be well to point out some of the reasons that so many really attractive prints missed winning at least second prize. There were really outstanding examples of carelessness.

A view of the ocean—or, probably, one of the great lakes—vast, still, impressive, at sunset, with an interesting sky and fine tonal values—a work of art, though thematically trite, hackneyed. The one obvious fault was that the waterline was decidedly not level.

Another marine, by the same admirable worker, was made near the shore, at evening. Water and (clouded) sky exactly equal in space and tone, resulting in a dull, monotonous effect.

A night-scene (not an underexposed and overprinted effect). Seemingly light foreground obscured, but probably snow-covered. View across a river or harbor towards a shore, the background. Vague forms must have been houses, for there were about a dozen white dots in Chinese white, put there with a brush, made to represent indoor lights! This is the crudest sort of faking—daring, but not consistent or convincing. Besides, the picture was almost equally divided into four parallel sections—foreground, water, background (shore and sky).

View of magnificent, rolling surf—bold, and consistently defined to convey sense of motion, superb in tone, but marred by a high foreground composed of confusing mass of sharply cornered boulders, which detracted from the beautiful surf.

A sunset view on river, with four men rowing a boat—all, including nearby shore and uppermost section of sky, in deep-black tone. With sunlit part of sky, there were four broad, parallel masses, alternating in tone, yielding five distinct objects of interest.

A superbly rendered group of cliffs in summer-time. Far below, the white surf is seen. Foreground is formed of the tops of cliffs covered with wild flowers—a very attractive picture. Unfortunately, immediate foreground down to bottom of print is composed of brightly lighted, sandy ground occupying one-third of horizontal picture-space, entirely ruining basic structure of picture, making it look top-heavy and dividing pictorial interest.

A striking marine—several steamers at anchor, slightly agitated waters, spectacular sky, sun partly hidden. The eye wanders aimlessly all over picture suggestive of the *puif errant*—finding no place to rest. The three conflicting elements—water, ships and sky—could be reduced to one by abbreviating lower section of picture—the foreground or water.

A beach-scene, five bathers wading in shallow water. Foreground and water interesting enough and tonal quality excellent; but white sky *ridiculously blank* and occupying *two-thirds* of picture-space. Figure at extreme left—near edge of picture—with upflitted leg and turning back on nearby companion, deliberately *walking out of picture*, thus spoiling the entire line of bathers.

By way of contrast to the foregoing, let us consider the merits of the successful three pictures.

For simplicity of material, singleness of purpose, beauty of interpretation and perfection of technique,

"The Lone Watcher", page 147, is an artistic achievement of the first rank. It is needless to draw attention to this or that observance of the principles of pictorial composition; everything that was needed to carry out the design he had in mind was done by the artist, even to the omission of a single object or effect that might intrude to mar the chaste and uplifting conception.

Data: Made off Orient Point, Long Island, N.Y., from steamer; August, 8.30 A.M. standard time; bright sun; 1 100 second; Only Junior camera (2½ x 3¼); 4½-inch R. R. lens; stop, F/16; Ansco Speedex Film; pyro; enl. on Eastman Portrait Bromide, Grade D; clouds "printed in".

Fred Aberle's "Fishermen", page 148, portrays a real occurrence. It engages the beholder's attention by reason of the spontaneity of the composition and the story-telling interest. The figures on the beach (in the foreground) are lower in tone, as they should be, thus emphasising the distance between themselves and the boat with its occupants. The picture is well graduated into planes, and the technique throughout is praiseworthy. Nevertheless, three-eighths of an inch trimmed from the bottom of the reproduction would have the tendency to improve it.

Data: July, 9 A.M.; Rev. Back Graflex (3¼ x 4¼); 7½-inch B. & L. Tessar; stop, F/16; Graflex Film; 1/40 second; enlargement, P. M. C. Bromide No. 7.

With the rapid march of progress, which often entails the extinction of familiar objects and customs, we wonder to what extent the artist is deprived of picturesque and inspiring themes. This is particularly true of sailing-craft, which includes the noble and time-honored square-rigger, as, with all sails filled, she sweeps majestically over the waters. What a sight compared with that of a huge, black-hulled and smoke-belching steamer of today! F. W. G. Moehus has favored us with a superb portrayal of a square-rigged ship, of the type which is a rarity in American waters. As one admires the slowly sailing craft, one cannot help wishing that the artist had been more fortunate to be present when the foresail, mainsail and the rest of the sails were set and filled, so that the great "windjammer" could be seen in all her power and glory. But let us be thankful for what Mr. Moehus has provided and, also, for the compensations in comfort and speed afforded by the modern grayhound of the sea.

Data: Made in Pacific Ocean off San Francisco; August, 2 P.M.; good light; 4 x 5 Eastman camera; 6-inch Plagimat; stop, F/8; 1 100 second; film; pyro; enlarged on Carbon Black.

Beginners' Competition

THERE are several points of merit in Mr. Stern's "Japanese China", page 153. Indeed, they far outweigh the shortcomings, and, generally, a successful genre—as good as the one under consideration—is not so easy to produce as a good landscape. Of course, the pattern of the table-cover is a little obtrusive, and the equal tone of the objects composing the group tends to monotony; but the young artist did not commit the unpardonable sin of reversing the position of the teapot or even that of the pitcher, which would have destroyed at once the good effect of the arrangement. A little more room at each end (not "either" end) would have improved the present pictorial design. A genre like this can often be made more interesting by a different kind of lighting, which, I hope, Mr. Stern will apply to his next representation of "Japanese China".

Data: June, 10, A.M.; cloudy; Eastman 3¼ x 4¼ plate-camera; 5¼-inch Goerlitz Anastigmat.

stop, F/22; 40 seconds; Premo Film Pack; pyro; Azo print; picture made near screened window.

The general pictorial effect of "Morning-Mist on the Sangamon", page 154, is what gives the picture much charm. The spacing is also to be praised. The black mass of the boat and the bit of shore, at the left, is unfortunate, as it is too heavy, too bulky, for the rest of the picture. Had the camerist waited until this part of the view received more light—he photographed at 3.30 A.M.—the picture would be better balanced and, perhaps, the atmospheric effect would not have been entirely lost. One cannot but admire Mr. Parrish's energy and zeal in taking advantage of the early morning-hour to capture an attractive picture. Such enthusiasm is rare. Perhaps, by retarding the printing of the thin parts of the negative, at the left—by the application of some light watercolor, or some equally effective medium, or even when making an enlargement—Mr. Parrish may be able to modify the present overpowering effect of this large, heavy mass.

Data: June, 3.30 A.M.; dim light; 3 A Premo; 6½-inch lens; stop, F/16; 5 minutes; Kodak Film Pack; Duratol for film and paper; Artura Carbon Black Studio Special Semi-Mat enlargement.

Example of Interpretation

ARCHITECTURAL subjects will engage the artistic skill of those who participate in our September competition. Memorial arches are legitimate subjects; and how they may be lighted, selected and placed, to ensure a satisfactory result, may be judged by the example offered on page 150. Data: Collinear lens, 14-inch single element; stop, F/32; K-2 color-screen; 6 seconds.

Our Contributing Critics

THE jury found much to admire in Dr. Rohdenburg's marine. In fact, it was awarded Honorable Mention. Nevertheless, the author very generously offers his picture for public criticism, and, I am certain, it will receive honest, fair and courteous treatment. Page 156. Data: July 13; light in foreground slightly overcast; brilliant sun in background; Zeiss Tessar F/4.5; stop, F/16; 1/20 second; Eastman Orthochromatic film; hydro; 2¼ x 3¼ film-negative enlarged on bromide; picture made off Nantucket Island, Mass.

THE picture criticised this month must have been easily recognised by all beholders who have visited North Conway, N.H., as Moat Mountain. The name was spelled very plainly by the author of the photograph as "Moult", probably because a few miles south of the locality there are the town of Moultonboro and the hamlet of Moultonville. The name Moulton is very common in New Hampshire, and to a stranger hearing the name "Moat" for the first time it might be easily mistaken for "Moult". Anyhow, the name of the elevation is spelled correctly on the map—Moat Mountain.

Interesting Figures

IN connection with the San Francisco Salon, concerning which Sigismund Blumann writes in this issue, we are pleased to add a word that might be of interest. The Art Museum where the exhibit was held is far out of town, rather inaccessible and requires a walk of several blocks from the nearest car-line over unpaved streets. Officially, in spite of these handicaps, 17,454 persons visited the exhibition in thirty-four days. There was an average attendance of 500 daily and the greatest number on any one day was 3,064. Surely this speaks well for the interest shown in photography.

City and Guilds Examination in Photography

IT may interest some of our readers to see the questions which were asked, and to ascertain for themselves how far they would be able to reply to them, remarks *The Amateur Photographer*. The figures in brackets after each question give the number of marks which a correct answer would secure. In addition to the questions, there was a practical examination, in which a lantern-slide had to be made from a negative, the absorption spectrum of a colored medium had to be drawn, and the increase of exposure it necessitated given.

1. Describe the properties of photographic objectives that affect the brightness of the image they give ("rapidity"), and state with regard to each whether it is always negligible or of prime importance in its effects, or intermediate between these two extremes. (50 marks.)

2. Give a concise account of the work of Fox Talbot, showing in what matters he was a pioneer in photography. If you have seen the apparatus that he used and that is now in the museum of the Royal Photographic Society, give a short description of it. (50.)

3. Describe the appearance (shape, etc.) of the particles of silver bromide in a gelatine-plate, and state what relationship there is (if any) between the size of the particles and sensitiveness. (50.)

4. Ammonia used to be the alkali in general use in development. Why is it now hardly ever used? Compare the relative advantages and disadvantages of ammonia, sodium carbonate, and caustic soda, as constituents in developers. (40.)

5. Imagine three bold black crosses on white grounds, each held to the wall by a nail that passes through the point of intersection of its arms so that one arm is horizontal, and that you photograph them simultaneously with a "rapid rectilinear" lens so that the image of one falls at the center of the plate, one at the middle of the side, and the other at the extreme corner of the plate. Each cross is now to be turned on its nail (in its own plane) through an angle of 45° and another photograph made. Describe critically the characters of the resulting six images. (45.)

6. What would be the effect or effects in platinum printing of using the developing-bath hot instead of cold? What would be the effect of adding a little mercuric chloride to the developing-solution or to the sensitive solution with which the paper is coated? Will the stability of the print be affected by any of these procedures? (45.)

7. Write a short account of sensitometry, especially in connection with gelatine dryplates. (40.)

8. Of what does the image consist after a plate as developed in the usual way is intensified by each of the following methods:—(a) Mercury and ferrous-oxalate, (b) mercury and ammonia, (c) the chromate method, (d) the uranium method? State clearly in each case why the image is made more opaque by the intensification. (55.)

9. If a silver-print is left (say, overnight) partly immersed in a hypo-solution, the image is reduced in intensity where the surface of the solution meets the print. Explain fully why this is so. (40.)

10. State and explain the advantage or advantages, if any, that apochromatic objectives have over achromatic objectives in photomicrography. (50.)

[How many camerists in the United States are equipped to answer these questions correctly? There should be a more thorough study of photography as an art and as a science. Then, such questions would not appear so formidable.—Editor.]



ON THE GROUNDGLASS

WILFRED A. FRENCH



The Hypo Club Counts Seconds

THE annual outing of the Hypo Club eventuated on the Great and Only Fourth. Thirty-two ladies and gentlemen assembled with cameras, tripods and portable refreshments at the club's commodious quarters, which we have been enjoying for some time now, owing to the corking generosity of President Bangs. You remember, I wrote you about that, five months back. We have only a handful of fair workers. The new, great majority, however, are made up of snapshooters with everything to learn. Charlie Bangs' business has taken a big jump, owing to the advertising he got, and still gets, from the big things he's done for our camera club. Hence our new secretary, Billy Burns, has taken hold. Gee, but he's a worker, too! He's named and started a monthly club bulletin, "The Click," which he edits, and gets out at his own expense, being a printer.

Just as we were preparing to be off, a thunder-shower let loose and kept us cooped up for nearly an hour. We were sort of quiet, listening to the noise of the shower, when Billy Stearns spoke up, "Somebody start something!" Nothing doing. Then Billy suggested that we start a discussion on something most needed in the club, seeing that most of us didn't know beans about correct exposure, or how to measure time. So we chose the best way to count seconds, since we had decided to make nature-studies in the woods. Bellamy, who is a good actor, took an old copy of PHOTO-EXA out of the book-case. Then he began to read and to illustrate an article written by a famous British pictorialist. It was entitled, "How to count seconds", and recommended the camerist to stand with feet apart, and to sway regularly from side to side, legs stiffened, raising the foot from the ground each time—after the manner of the once famous automatic walking toy, "The Kleine Cohn"—and saying aloud, "One, two, three, four!" Well; it kept us all in roars of laughter. Some story, I'll tell Mars! If any one tried that dope, alone, in the street or anywhere outside, he'd be pinched and locked up as a lunatic. Sure he would!

Then Jack Floyd described a sensible way, by holding a string 9 $\frac{3}{4}$ inches long with a small, round leaden ball at other end of it, between thumb and forefinger and letting it sway back and forth—each beat a half-second. While he was performing, we pulled out our watches counting each beat, and found that ten of them gave five seconds; twenty of them, ten seconds; and so on. It was perfect.

Mrs. Almy, one of our best workers, said she used an old and popular method, namely counting seconds and saying aloud and regularly, "one hundred and one, one hundred and two, one hundred and three," and so on. We checked her up and found her way O.K. Mrs. Dyer then said that her favorite way was to say out loud, "One chimpanzee, two chimpanzees, three chimpanzees," and so on. We all agreed it was fine.

Fred Hilman, who is a better mimic than photographer, followed, describing a method taken from an English magazine and written by "Piffle, the Walrus", he said. It advocates the imitation of the sounds of animals. If you are in the field and crows are cawing which happens so often, count the intervals, said to be

one second apart. "I did that once, in October. The good, red book called for six seconds, with stop 22, about 4.30 p.m. A crow was obliging and I got my six seconds all right. In calling at the photo-finisher's for the prints, I was told that the plate was underexposed. I blamed the red book." "Suppose you illustrate to us just how your crow cawed," called out Bellamy. Hilman at once imitated tone and action of the bird, cawing six times in very quick succession. We all let loose and roared. It was so funny. "Why that's only *two* seconds; three caws per second! Must have been a *young* crow. You should have taken your cue from an *old* one; they're more deliberate and caw slowly," explained Bellamy. "That's where the meter was lame. It didn't say a word about the age of the darned old crow!" yelled Hilman. And we all sat back and bleated. We hadn't strength enough to laugh. But above the din, we could hear Charlie Bangs sing out, "All aboard for the woods! The rain's stopped. All clear again!"

A MEMBER.

Abusing the Soft-Focus Lens

A STORY is told about William Gladstone and John Bright, who sat for their portraits to Sir John Millais, the famous English portrait-painter. Each, separately, on seeing the unfinished portrait of the other, tapped his forehead and hinted that the subject was not "all right here."

The above-related anecdote suggests the danger of the reckless use of the soft-focus lens in the hands of an ignoramus or a fanatic. One such individual held a show of his abominations (alleged portraits) in a New England city, last spring. One of the visitors, in beholding the alleged portrait of one of his friends, was greatly perturbed. Pressing his hand to his forehead, he exclaimed, "Poor fellow; he cannot be right in the upper story!"

Long Chemical Names

"WHERE do they get these weird names they give coal-products?" asked the Mere Man.

"That is easily explained," replied the chemist. "For instance, if a laboratory chemist is experimenting with peoandroelonthraplondrion and amalanprontniblatkion and samalanthrandepian and gets results in a new drug, he merely combines the names and calls the new drug peoandroelonthraplondrionamalanprontniblatkionsamalanthrandepian."—*Cincinnati Inquirer*.

Let not the readers of PHOTO-EXA reader be deceived. These exceedingly long words, belonging ostensibly to the chemical field, are merely a hoax. There are no such words and the uninitiated Western newspaper "fell for them". If, however, any one is really interested to see a genuine chemical term of considerable length, we present the following: "Tribromanhydropropionyl-phenylenediaminehydrochloride" (C₁₂H₁₀Br₃N₂Cl). Here is the sodium salt of amidobenzoic naphtholbetamonomosulphonic acid or Eikonogen, the well-known developer.—EDITOR.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



October is Camera Club Month

In these days of "Days", "Weeks", "Months", etc. set aside for the special benefit of some person or organization, it is only fitting that the camera club should have a "period", and so the month of October has been set aside and designated by the Associated Camera Clubs of America as "Camera Club Month". The difference between the "Camera Club Month" and many of the other designated periods will be that the thirty-four organizations affiliated with the national association will use every effort within their means to provide a program that will be both interesting and instructive to every camera-user in the U. S. A., whether amateur or professional, without cost to him. Special weekly programs will be arranged, and so made up that the camera-using public will be interested and will miss much to their advantage if it does not take advantage of the opportunity and visit the club or photographic society in its or the nearest town. Exhibitions and demonstrations will predominate in the make-up of the interesting events. A special appeal will be made to the amateur, he who pushes the button and lets the corner drug-store "do the rest." An attempt will be made to show these camera-users that they are missing a tremendous amount of the real joy of photography by not doing their own work and mingling with others likewise engaged.

With the advent of the camera club, and its complete facilities for photographic expression, the day of the bath-tub and the kitchen-sink with their resulting mess has long since passed. The camera club of to-day, in most instances, is often better equipped than a great many of the commercial photographers. This has been made possible by the cooperation of numbers. There are many camera clubs in the United States which, besides the darkroom and printing-room, also have enlarging-rooms, lanternslide-rooms, and electrically equipped studios. One organization recently bought a three-story and basement building, and the members themselves have completely altered the building for their own needs. The first floor is devoted to a combination exhibition-hall, library and meeting-room, the second floor is composed of locker-room, darkroom, printing-room and general-work room, the third floor contains several projection (enlarging) rooms and a modern studio. The steward is located in the basement, as is also the commissary department. So far as our knowledge is concerned, this is the only instance we know of where such pretentious quarters are maintained by a photographic organization composed for the most part of amateurs.

In spite of the fact that Americans are known to "try anything once", it is woefully true that there has been, until recently, a reluctance to become acquainted with the Camera Club. This condition has undoubtedly been due to the fact that the camera-using public has been under the erroneous impression that these societies require an advanced knowledge of photography to entitle one to membership. Nothing is further from the truth. In fact, there is every reason to believe that more than eighty percent of the members of these photographic clubs learned the first rudiments of

pictorial photography at the time of becoming affiliated with their organization. To correct this impression is one of the reasons for specifying a Camera Club Month, and attempting to interest the camera-using public in the institution of the Camera Club which was created solely for their convenience and pleasure. England, probably, has more photographic organizations than any other country. Many of their societies have but small quarters in which they meet and discuss to their mutual advantage the various elements entering into pictorial photography. These small rooms, however, are the seed from which larger bodies will eventually grow. And so, here in America, many new camera clubs have been organized and are being fostered by the Associated Camera Clubs of America. The public is being educated to understand that the camera club does not exist solely for the advanced worker, but is maintained, coöperatively, for the mutual advantage of its members who are interested in photography. This is especially true of the members of the A. C. C. of A. who are assuming efficient management and modern methods and equipment, so that their members may follow their hobby under pleasant conditions and pleasing surroundings at small cost. The spirit of cooperation shown by the members of the A. C. C. of A. is commendable. Many of the more progressive and advanced clubs are showing the way to their less fortunate and newer associates in pictorial photography, oftentimes at considerable sacrifice to themselves in time and money. That is the spirit of the Association, and all photographic clubs or societies in America which are imbued with the spirit to help promote and cultivate the science and art of photography in cooperation with each other are members. Any organization that looks entirely for its own welfare does not and will not long continue as a member. This is clearly expressed in a motto used recently by the Association "One for all—All for one—Let's work together". And so in this same spirit of cooperation October will be known in camera club circles as "Camera Club Month", a time when a special effort will be made to bring the camera-using public to realize that the camera club exists principally for their convenience and pleasure. Mr. Louis F. Bucher, Secretary of the Associated Camera Clubs of America, will gladly put enquirers, without any obligations on their part, in touch with the camera club in their city, if they will address him at 27 Franklin St., Newark, N.J.

Motion-Pictures as a Hobby

THE really progressive photographer—unless he is a pictorial worker in the strictest sense, and wedded to regular standard methods of photography—likes to keep pace with every improvement in the art-science. He tries the various printing-processes—straight, bromide enlarging, gum (single or multiple), bromoil and carbon; also color-photography—the Lumière Autochrome and the Paget. If he is very energetic he tries Kinetography (motion-picture photography).

He attempted it on a limited scale a number of years ago, and "got stung", according to modern

slang. The trouble was that he bought a well-advertised equipment—below standard size—at a ridiculously low price, about \$100, and discovered that, though it seemed plausible, it was a swindle. Fortunately it was never advertised in PHOTO-ERA MAGAZINE. On the contrary; it was boldly exposed as a sham.

Naturally, this amateur kinematographer became discouraged, and vowed that he had got through with that branch of photography, unless he had a change of heart and acquired an equipment of the professional type, which, of course, cost many hundreds of dollars, was bulky and requires the use of a special and heavy tripod. But patience is rewarded.

Here bursts into the limelight a new and wonderful motion-picture camera—the Sept Camera, which is used like a regular camera, but without the use of a tripod, and even dispenses with the customary hand-crank. More than all this—it functions automatically, *i.e.*, you sight your object in the finder and simply press a button *once*, and it works away merrily until you stop it! It weighs less than four pounds, and can be used to make "still" pictures, one at a time, besides the regular, continuous film-strip of fifteen feet.

This is a progressive step in Kinematography that is simply bewildering; but as the equipment—which, by the way, costs only \$225, complete with carrying-case and six magazines—is sold by a photo-firm whose name is a household-word in this country, *viz.*, Willoughby, of New York City, the purchaser runs not the slightest risk, and everything announced in favor of the Sept Camera is gospel truth.

It is evident, therefore, that this compact and efficient motion-picture outfit will enable its user to undertake a class of work which, with the large and heavy equipment, would be inconvenient, if not out of the question. Of course its use in and about the home will be the first thought of its owner—to photograph the little ones; the antics of pussy and her litter; other domestic animals; wife making a dress or trimming a hat; your friend learning to play golf; accidents in the street—in fact, the field is virtually unlimited. Then comes the greatest enjoyment of all—the projection, at home among the members of your family, with invited friends, of the captured trophies. Those who are interested, and there will be many, should communicate with the agent, Charles G. Willoughby, 110 West 32nd street, New York City.

A Word for the Film-Pack

SALTDALE, BAY-SHORE, N.Y.

July 13, 1922.

EDITOR OF PHOTO-ERA MAGAZINE:

I have been interested in Mr. Kincheloe's articles in the June and July issues of PHOTO-ERA MAGAZINE. They contain much valuable information and many important suggestions. I do not agree with him, however, in his statement that the use of film-packs is "simply impossible" in Florida in summer. I have "done" Florida and the West Indies photographically in summer, using 5 x 7 film-packs with my Graphic camera and Cooke lens, and have had no trouble from softening of the film, consequently none from lines in pulling out the tabs; and, from the resulting negatives and prints, I could see no evidence that the films did not lie perfectly flat in focus. Their keeping-qualities, too, I found to be excellent, not having developed them until several weeks afterwards on my return to New York. Of course, I carried them in tin-containers, each made to hold a pack. I had been advised that I

would have trouble with film-packs, but I wished to avoid the trouble and inconvenience of carrying plates and filling plateholders on a long trip. I have tested, by actual experience, the practicability of the film-pack, and its great convenience in lightness, portability and the little space required for filing and storage; and, with a film-pack adapter, focusing on the groundglass is accomplished, when necessary, and this is a great convenience.

Respectfully

JAMES H. DOWNEY.

A Collection of Interesting Folders

WE like to keep in touch with old friends and new, so we wrote to the Gundlach-Manhattan Optical Company, Rochester, New York, for information with regard to recent additions and improvements to its optical and photographic products. In due course, we received a number of attractive folders which described in detail the well-known Turner-Reich Convertible Anastigmat F 6.8, Hyperion Diffusion Portrait Lens F/4, Korona Panoramic View and Banquet Cameras, Folding Studio Stand, the Ultrastigmat F 1.9 (for motion-picture cameras), Radiant Projection Lenses and Turner-Reich Prism Binoculars. We believe that our readers will feel repaid to send for one or all of these folders. They are well worth reading.

New Members, Pittsburgh Salon, for 1923

THROUGH the courtesy of Mr. Chas. K. Archer, secretary, we give the names of the new members of the Pittsburgh Salon for 1923. The list includes Elizabeth R. Allen, Morristown, N. J., Henry A. Hussey, Berkeley, Calif., W. C. and T. M. Jarrett, and W. W. Zieg, Pittsburgh, Pa., Myres R. Jones and Sophie L. Laufer, Brooklyn, N.Y. We anticipate seeing the work of these new members and wish them success.

Exhibiting Unmounted Prints

THE packing and forwarding of mounted prints destined for exhibitions, particularly those in foreign countries, even in neighboring Canada, has been the source of much hardship, expense, delay and disappointment. Ask the exhibitors and also the secretaries of the various salons. The complaints from these sources have been loud, frequent and fully warranted.

It has now been decided by the directors of the London Salon, in soliciting prints from pictorialists who live abroad, that they shall be sent *unmounted* to facilitate transmission by mail. Prints, packed flat, protected by very stiff, flexible cardboard and adequate wrappings, may be sent by parcel-post, to foreign countries only, or by first-class mail if the sender so prefers.

The prints will then be temporarily attached to mounts so that later they can be easily detached without the least injury to the print—and displayed under glass, thumb-tacks being used to hold the glass in place.

This method of showing prints will undoubtedly be adopted at American salons, and camera clubs in general, as regards prints that come from foreign countries, and may be extended to prints by native workers—provided that the present high cost of glass will prove no serious obstacle.

More About the Efficiency of the Graflex

STETTLER, ALBERTA, CANADA.

EDITOR PHOTO-ERA MAGAZINE:

I was pleased to read the article by Lehman Wendell in the July issue on "Increasing the Efficiency of the Graflex." For some time now, I have been using the front element only of my Cooke lens for very close-up work with my Graflex Camera. This lens is $5\frac{3}{4}$ -inch focus and, with the bellows-extension allowed, I can not get within 30 inches of my subject. When, therefore, I had some copying to do one day, I discovered that I could get within 4 inches of my subject by using the front element only. Other users of cameras of this type will do well to try both front and rear elements separately, even if they are not convertible, which mine is not supposed to be.

Yours faithfully,

J. C. CUNNINGHAM.

Camera Pictorialists of Los Angeles

THE Sixth Annual International Salon of Photography, under the auspices of the Camera Pictorialists of Los Angeles, will be held November 20 to December 11, at the Museum of History, Science and Art, Los Angeles, California. Regular entry-forms will be mailed in time to enable contributors to have their entries reach the Salon Committee before November 1, 1922, which will be the last day for receiving prints. Further particulars may be obtained from N. P. Moerdyke, secretary, 811 Washington Building, Los Angeles.

Cincinnati Camera Club

THE Cincinnati Camera Club has shown an unusual degree of energy at a time—midsummer—when most people relax and assume a nonchalant air. This wide-awake group of workers prepared and issued the initial number of its bulletin, *The Developer*, during the last week of July, dating it August, 1922, vol. 1, No. 1. The contents are distinguished by breezy atmosphere, clarity of expression and spontaneous wit—never descending to vulgarity or inanity. It's a bright, clean and creditable four-page sheet. The humorous poem, "SMITH VERSUS STRUSS", is original and clever. So is the introduction. All bears the impress of the nimble-witted and well-equipped secretary, G. A. Ginter. Long life to *The Developer*!

Chart to Find the Depth of Focus

IN this issue will be found an article on finding the depth of focus by means of charts. It was carefully prepared by Messrs. Taylor, Taylor & Hobson, Ltd., makers of the famous Cooke lenses, which are distributed through Burke & James, Inc., Chicago, sales agents for the United States. The charts, described in the article, may be obtained at a nominal price by writing to Burke & James, Inc., who will be pleased to furnish them to those who are interested.

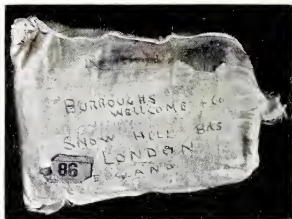
Elysian Camera Club

THE Elysian Camera Club of Hoboken, N.J., has an energetic set of officers eager to act efficiently, harmoniously and successfully for the best interests of the club. Its summer bulletin, issued during July, reflects the

spirit of this young club—organized April 22, 1922—and rivals similar publications, by other clubs, in solid sense, wholesome humor and conscientious effort. It has a department devoted to popular scientific topics edited by a member of the Scientific Research Committee—a commendable effort and one worthy of emulation. The Elysian Camera Club has our best wishes. J. Henry Wendt is the corresponding secretary.

Photography at 17,000 Feet Above Sea-Level

ON the morning when the tragic news was announced of the result of the final attempt on Mount Everest by the gallant members of the 1922 Expedition, the parcel of which a photograph appears below reached the head offices of Burroughs Wellcome & Co.



Protected by a succession of coverings was a tin case containing two negatives and a report from Captain Noel, the photographer to the Mount Everest Expedition, some of whose wonderful pictures of the mountain have already appeared in the press. This parcel had traveled from the Expedition's main base camp on Rongbuk Glacier. The negatives it contained showed a general view of the camp with Mount Everest in the background and a near view of Captain Noel developing 10,000 feet of kinema-film with Rytol.

The entire outfit of chemicals for photography had been entrusted to Burroughs Wellcome & Co. as the result of the experience of the 1921 Expedition with Tabloid Photographic Chemicals. That this trust was justified is proved by Captain Noel's report:

MAIN BASE CAMP, MOUNT EVEREST EXPEDITION,
RONGBUK GLACIER, 17,000 FEET, TIBET.

Dear Sirs:

I have pleasure in telling you that the chemicals you supplied to the Mount Everest Expedition have proved most excellent. I consider that Tabloid Chemicals together with Rytol Kinema Film Developer are perfect for travelers and expedition-work on account of their portability, rapidity in preparation for use, chemical purity and keeping-qualities.

I am developing 20,000 feet of kinema-film with Rytol, and find it excellent in the intense cold of these regions. The image and contrast which Rytol give are perfect. I enclose you a photograph of the Base Camp of the Expedition below Mount Everest, 17,000 feet on the Rongbuk Glacier, the negative produced with Rytol Developer. I also enclose you a photograph of myself at work at my darkroom-tent, developing 10,000 feet of kinema-film with Rytol.

Yours very faithfully,

(Signed) J. NOEL, Capt.,
Photographer to the Mount Everest Expedition.

May 5, 1922.

Photographing Spirit-Tennis

A WASHINGTON correspondent, an avowed believer in spiritual phenomena, sent me, last July, a photograph of my good and esteemed friend, Senator George Wharton Pepper, playing tennis. The sender of the picture which represents the American statesman with racquet raised high as if he were serving, wishes me to explain the presence of the many spirit tennis-balls which seem to be flying about promiscuously near the player. The photograph was made by Harris & Ewing, the leading photographers of celebrities in the National Capital and is a perfectly straightforward piece of work. If it had been made earlier in the season, the picture might have been acquired by the veteran novelist, Conan Doyle, and used by him in his propaganda of spirit-manifestations. Instead, however, it appeared in the admirable rotogravure section of *New York Herald*, early in July. A strange feature of the picture is the presence of about ten "tennis-balls" plainly visible above the head of the player and relieved against a mass of dark foliage which constitutes the background. Two of the "balls" are seen inside of the racquet poised high in air, and this circumstance greatly perplexes my spiritualist-friend, the sender of the photograph, who, however, is not familiar with picture-making.

I dislike to be disagreeable, but I was obliged to explain to my correspondent that, contrary to what Sir Oliver Lodge or Sir Conan Doyle might claim, these wildly agitated spheres are not disembodied spirits of tennis-balls, but the direct result of optical aberration known as "disks of confusion". Singularly enough, these round, white spots in the photograph are the size of standard-sized tennis-balls. In order to make this action-picture at a high speed, the photographer used his lens at a fairly large aperture, F 8, concentrating the definition on the player, the distance from his feet to the top of the racquet being about nine feet. Hence, objects beyond the plane of sharp focus are indistinct and distorted. In the case of the many irregular areas of light or sky which one may see struggling through the foliage of trees or bushes, these are converted by the camera-lens into perfectly round globes or disks of light. Of course, if it were possible to have a lens with such depth of focus or penetration that it would render all objects on all planes, from the main object—a tennis-player in action, for instance—to the extreme background, *uniformly sharp*, the optical phenomenon known as "disks of confusion" would disappear, and the numerous bright openings which characterise the foliage of trees or bushes when seen against the light or a brightly illuminated surface, would appear in the photograph as the eye sees them in nature. And yet such a photographic feat is easy of accomplishment, but only by making a "still" picture. To do this successfully, focus sharply on the figure placed at, say, the hyperfocal distance of the lens, stopping down to F 8, and then to F 22 or F 32, until the background is quite sharp. Give the necessary exposure, the length of which may require the use of a tripod or other firm foundation. If the figure and the air have been perfectly still, the result should record extreme and uniform sharpness of definition.

As a figure placed at the hyperfocal distance, or even within its camera-ward latitude of many feet, yields a rather small image, a very near position may be preferred. In this case, planes or objects behind the figure are not so easily brought into sharp focus. It is therefore necessary to "divide" the focus, i.e. to focus sharply, at first—with the lens at full opening or nearly so—on an object the position of which depends on the total depth of field or the distance from the figure or



MAY PRIZE-WINNING PICTURE
JOHN G. MARSHALL'S FLASH POWDER
COMPETITION. BY ROLAND W. REED,
DETROIT, MICH.

foreground to the extreme background or horizon, and then adjust the diaphragm, selecting the stop that yields the required clearness of definition.

In the old days, when the utmost detail throughout the entire picture was a *sine qua non*, the rule was to place the sharpest focus in the center of either half of the groundglass, and then insert stop F 22 or F 32. However, a little practice will soon enable the worker to determine a quick and reliable method.

From the foregoing it may be seen how difficult, if not impossible, it is to make a high-speed picture, particularly at close range, and have anything, except the principal object or objects, clearly defined. Incidentally, the data of Harris & Ewing's action-picture of Senator Pepper are as follows: June, 1922; 8 A.M.; good light; 4 x 5 Graflex; 7 1/4-inch Wollensak lens; stop, F 8; 1 1/2 second. Being experienced, the photographer knew that the relatively slow movement of the player enabled him to obtain a successful result at such a moderate shutter-speed.

W. A. F.

Bromoil Materials

IN view of the increasing popularity of bromoil prints among pictorial workers, Ralph Harris & Co., regular photo-dealers in photo-supplies, 26 30 Bromfield Street Boston, Mass., beg to announce that they now carry a complete line of bromoil materials of the best quality. These consist of bromoil papers, pigments and special brushes. Price-list sent at request.



ANSWERS TO QUERIES



W. B. C.—If there is depth of focus in a small negative, it will appear in the enlargement; if in the small negative there is no depth of focus, no amount of enlarging will put it there. It must be remembered that enlarging cannot put into a picture that which is not in the negative. With this in mind, it is advisable to obtain depth of focus at the time the picture is made.

M. A.—Drilling glass is rather a difficult matter for an amateur. The usual method is to use a steel-drill—a brace and center-bit will do—lubricated with turpentine in which some camphor has been dissolved. A professional glass-cutter can manage this easily enough; but with the amateur it generally results in a good deal of breakage, mainly owing to the tendency to drill too fast.

F. W. G.—A concentrated stock-solution of hypo may be kept conveniently in the form of eight ounces of hypo to the pint. This can be diluted with its own bulk of water to fix negatives, or with three times its bulk to fix prints. There is no need to use greater strength for negatives than for prints, although the proportions given are those usually given.

B. D.—The dingy or dirty white on your prints may be caused from the paper being too old; or, perhaps, it has been stored in a warm or damp place. Fresh supplies of paper are always better to use than old stock, even though the guarantee-date on the old stock has not expired.

C. B.—Using a color-screen without color-sensitive plates is of little advantage. An orthochromatic-plate and color-screen together will help greatly to give true rendering of clouds or of many-colored flowers, of distant mountains, or of objects representing fine gradations of color; but either one without the other is handicapped.

P. E. W.—To prevent stress-marks when cutting up large sheets of bromide paper we recommend placing two pieces gently face to face and cutting them together. The best way is to cut them with a good print-trimmer, as most all trimmers are marked with a lineal scale which can be used to get the pieces uniform in size.

H. K. C.—For snapshot-work in city-streets on bright days the shutter should be set at 1/50 of a second, the stop at F/16 and the focusing-indicator at twenty-five feet. This combination of shutter-speed, stop and focus will meet all ordinary requirements of the camerist equipped with a hand-camera. Virtually, any hand-camera—thus set—becomes equivalent to a fixed-focus box-form camera, and is eminently suited to genre-photography in city-streets.

S. B. A.—The advantage of a reflecting-camera lies in the fact that the image of the subject appears on the groundglass right-side up until the shutter is released. No focusing-cloth or tripod is required to compose each picture properly and to the best advantage. There are many excellent reflecting-cameras now on the market. Some foreign instruments fold into a small compass and may be carried as easily as a small hand-camera. Most reflecting-cameras are equipped with a focal-plane shutter, and are used extensively to make speed-pictures. However, these

cameras are equally well adapted to all forms of amateur and professional photography. Owing to the remarkable efficiency of the focal-plane shutter, the use of an anastigmat lens is virtually required to obtain satisfactory results. All reflecting-cameras are listed with high-grade lens equipments. The selection of the lens depends on speed, focus and cost, and rests entirely with the individual camerist.

O. C. M.—Horizontal scratches on roll-film negatives are sometimes caused by trying to twist the paper more tightly around the spool after removing it from the camera. If, in addition, small particles of emulsion become loosened during the operation of twisting, they are apt to tear long, deep gashes in the celluloid base of the film. Such abrasions cannot be removed satisfactorily by retouching. Whenever possible use a roll-film camera that is equipped with some form of tension spool-holder. This device prevents the film from unrolling faster than the winding-key is turned. In any event, it is far better to wrap up a loosely wound roll in heavy manilla paper than to try to twist the black paper more tightly around the film.

C. H. W.—Long bellows are required to copy objects natural size or nearly so. Often, very satisfactory copies are made by using so-called portrait-attachments and copying-lenses in connection with the lens supplied with the camera. Technically, the best results are obtained by using a plate-camera equipped with a double- or triple-extension bellows and ground-glass for focusing.

P. O. C.—On a camping-trip, films are preferable to the use of plates unless accurate scientific photography is to be attempted. The almost exclusive use of films throughout the World War is proof enough that satisfactory results are obtained. In your case weight is an important item; and likewise the danger of breakage must be considered. A small vest-pocket roll-film camera equipped with an anastigmat lens should meet your requirements efficiently. The best negatives may be enlarged to 5 x 7 or 8 x 10.

J. E. L.—Long-focus lenses generally improve the perspective; at the same time, they narrow the angle of the picture to such an extent that the field of view is reduced. The entire matter depends upon the work in hand. For pictorial photography, it is better to have a lens of fairly long focus than one that is too short.

A. B. W.—An F/4.5 lens stopped down to F/6.3 is identical in speed to another lens of the same focus that works at F/6.3. The speed in this case is not a matter of the construction of the lens, but the size of the stop.

E. R. T.—Damage to the bellows of your camera might be a cause of the spoilage of your films. The greater part of the image seems to be fogged by diffused light, and the various black lines represent pin-hole images of the sun that were moved about on the surface of the film as the camera was moved. It is a common experience that only some negatives on a spool are fogged in such a case, as it depends on how long the camera is carried with the bellows opened; the position of the sun and the volume of light that strikes the camera are contributing factors.



LONDON LETTER

CARINE AND WILL CADBY



THE weather has come in for more than its usual share of discussion this summer. Those photographers who wisely followed the advice of the railway-advertisements, and took their holidays early, scored considerably. They had an uninterrupted succession of sunny days; and, owing to our daylight-saving plan, about twelve hours a day of good photographic light. But, since the middle of June, there has been a sad change. For some weeks, the weather has been uncertain and dark. Several outdoor-functions in town have had the heart taken out of them by cold and rain. Ascot day was so bad that one doubted the authenticity of a good many of the press-photographs. The funeral procession of Sir Henry Wilson, who was assassinated entering his own house in London, was carried out in gloom and rain. A cinematograph photographer had obtained a place of vantage on one of the railway-bridges that crosses Ludgate Hill. It was an excellent position, as it faced up to St. Paul's Cathedral; but as our train passed, instead of an immense crowd lining the pavement, only the tops of a forest of umbrellas could be seen. At the trial of the men accused of the murder of Sir Henry, for obvious reasons no photographs will be allowed to be made, and should some enterprising cameraman succeed by stealth in obtaining even sidelights of the scene and the actors, publication will be prohibited. So, for once, our illustrated papers will not tell us the news in pictures; and, so unused is the man in the street to secrecy, he will probably feel defrauded.

We chose the quiet luncheon-hour to visit the exhibition of photographs by Mr. Pirie Macdonald at the Royal Photographic Society's rooms. They were almost empty; and, yet, we had the embarrassing sensation of being, what old-fashioned journalists call, "the cynosure of all eyes." Wherever we turned, there were faces of men; and all looking at us. Even if their heads were turned away, their eyes were upon us. We defy any one to wear a "brazen front" under such an ordeal; for these portraits are not only, many of them, life-size, but they are so real and lifelike. We seemed to be gazing at the man himself, and not at his effigy on a flat surface.

We need not describe Mr. Pirie Macdonald's work to American readers, they know it well; but they can hardly realise its effect on British photographers. It is a bad foil for English work. It can be compared only to those graphic American expressions that say in a few terse words what we labor to convey in a timid hundred. Mr. Macdonald does not spend any time beating about the bush; you want a portrait, well, you shall have it. A picture of the real individual, truthful, convincing, original and amazingly clever. We walked around and around; and, then, sat and studied these remarkable photographs, all big heads—some gave us the impression of being almost more than life-size—with very few exceptions all looking into the lens, and all with such natural expressions, such off-guard looks, that we sometimes felt we were almost trespassing on psychical privacy by looking at them. The only sitters who did not wholly yield up their inner selves to Mr. Macdonald's inquisitorial camera were Sir Robert Baden Powell and Mr. J. C. Squire, both

of whom seemed to be aware that they were facing the camera. But the others known to us, such as Sir Oliver Lodge, G. K. Chesterton, Ian Hay, Arnold Bennett, were as natural, and filled with character, as Elihu Root with his granite expression.

The foreword to the catalog could not be improved upon as an epitome of the exhibition, and we take the liberty to quote it, "I am feeling more and more, as time goes on, that the photographer who devotes his energy to expressing *himself* instead of being the sensitive medium through which the *subject* is expressed, is shooting by the mark; that over-wrought technique or artful artiness to the obscurement of the subject is not the prime purpose of Portraiture."

Businesses are becoming very educational in spite of the drastic economy that is everywhere to be seen at the present time. Some of our large firms are taking up the matter and organising classes for their younger employees. One of the largest and most progressive photographic houses in London is adopting this scheme, and among the subjects to be considered is "Correspondence." As the originator explained to us, every letter written by an employee should be propaganda for that firm. It should be a real letter, not a string of clichés, and show intelligence and interest.

No doubt our American readers, with their experience of live-letters, will think this tuition unnecessary; but we assure them that it is most essential, for some of the letters we receive from important and recognised firms are—well, amazing. We have before us, as we write, an example, being a communication from a well-known photographic plate- and paper-making firm. The writing is almost undecipherable—no, dear reader, it is not even typed—and it regrets in a stereotyped and rather cavalier manner that the bottle of toner sent was just fifty times larger than we ordered! It "trusts we may be able to make use of same"—hardly in our life-time!—and winds up with that shocking old stager, "awaiting your further favors." It is this kind of letter that makes us feel that correspondence-classes would certainly have their uses.

We have been much interested in the series of "First Photographs" that has lately been concluded in PICTURE-ERA MAGAZINE, and noted that most of the contributors, to a certain extent, have been successful from the very beginning. That is to say, that they succeeded at once in obtaining very creditable negatives. This seems to point to the fact that either they must all have been careful and scientific in their first experiments, or that photography is the child's play the big firms would have us believe. Perhaps, there is something in both explanations, for the careful and intelligent following of directions goes far to obtain good results even from the beginning. But with that much admitted, we who have used a camera longer than it is necessary to be exact about, still contend there are pitfalls, and many of them, for the unwary; and, if our first plate were still in existence, it would show, not a picture, but just a spoiled plate. But we think that the series demonstrated that such are not necessary, and it is only the careless and flustered individual who needs emerge from the darkroom for the first time without having obtained tangible and stimulating results.



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following are reported exclusively for PHOTO-ERA MAGAZINE from the law-offices of Norman T. Whitaker of Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The patents mentioned below were those issued during the month of July from the United States Patent-Office, the last issues of which have been disclosed to the public.

John S. Greene of Rochester, N.Y., has received patent, number 1,421,079, on a photographic-developing apparatus.

Patent, number 1,421,092, has been issued to Edwin E. Manter of Anburndale, Mass., on a camera.

Photographic-printing machine has been invented by Malcolm L. Cossitt of Alameda, Calif., patent, number 1,421,413.

Charles Spiro of New York has received two patents pertaining to Cameras. First patent, number 1,421,735, on a reflex camera. Second patent, number 1,421,736, on a curtain camera shutter.

Patent, number 1,421,859, on a printing machine, has been issued to John D. Thompson of Rochester, N.Y.

Film-holder patent, number 1,422,029, has been received by William S. Brackney, Elizabethton, Tenn.

Guy C. Cross of Denver, Colo., has invented a new photographic film rack patent, number 1,422,341.

Paul J. Marks of Rochester, N.Y., has received two patents. Patent, number 1,422,460, on a photographic shutter. Also patent, number 1,422,461, on an iris diaphragm.

Film-testing machine patent, number 1,422,665, has been issued to Gaston L. Chanier of Jersey City, N.J.

Rudolph Klein of Rochester, N.Y., has invented an iris-diaphragm patent, number 1,423,224.

Patent, number 1,423,364, has been issued to Joseph Sharpe of Hampton, Va., on an aerial mounting for cameras.

Plate Envelope patent, number 1,423,420, has been issued to Alfred P. Hantsch of New Brunswick, N.J.

George V. Rowden of Hove, England, has received patent, number 1,423,457, on daylight-developing tank for photographic roll films.

Alexander J. Agnew and Frank F. Renwick, both of Ilford, England, have received patent, number 1,424,062, on a high-temperature development of photographic materials.



"Phodeko"—A Wonderful Discovery

WE recently had the privilege to witness a demonstration of photography by the aid of "Phodeko" developer and "Phodeko" fixer which left us wondering where this remarkable invention or discovery will lead to, says *The Photographic Dealer* of London, England. That a distinct advance has been made can be believed when we state that the developer, which can be made to work slowly or rapidly at will, never loses its strength. It can be used up to the last drop and added to as occasion requires, and there is no discoloration, even

if exposed for months to the open air. The "Fixer" has even more remarkable qualities since it not only perfectly fixes the photographic image in ten minutes, but renders the surface of the film, plate, paper or card practically indestructible.

Let us relate exactly what occurred at the demonstration. Two Wellington plates were exposed in an ordinary hand-camera and then handed to us for development. We developed them both in "Phodeko" developer and obtained two first-class negatives filled with gradation and possessing every detail. The plates acted in precisely the same way as they would have done in an ordinary metol developer. One negative we placed in the ordinary hypo fixing-bath, the other in "Phodeko" fixer. In ten minutes the negatives were taken out, rinsed in plain water and dried. We should here explain that negatives and prints fixed in "Phodeko" require no washing, merely a rinse in a bucket of water.

The drying-process was indeed a revelation. The negative fixed in hypo was held near a gas-ring and very soon the emulsion melted and could be wiped off the glass with a finger. The one fixed in "Phodeko" stood the test when the glass was too hot to hold, and in a minute or so was perfectly dry. We were then invited to try to scratch or damage the film-side of the plate with our finger-nails. We did our best, but all to no purpose, not the slightest trace of damage was visible. This negative was then laid upon the gas-ring until the glass was smashed into fragments by the intense heat. As soon as we could handle the pieces we tried again to scratch the film and failed.

A spool of Kodak negative-film was next placed in a kinematograph camera and a short length exposed upon a moving subject. This was developed and fixed in "Phodeko" solution, and dried by a gas-fire. The film was placed so close to the fire that it became too hot to handle. In a few minutes the film-negative was dry and possessed the same remarkable qualities as the unscratchable plate. Not only was the coated side of the film protected from damage, but the plain celluloid-back was also equally proof against destruction.

The strip of film was afterwards run through a projector with an unprotected "gate," which would produce the well-known "rain" markings upon any ordinary film; but not the slightest scratch appeared upon either side of the film. We have a piece of that film and have invited many to have a scratch at it, but it remains perfect.

The abolition of the tedious washing, the rapid drying, the lasting properties of the developer and the protective qualities of the fixer entitle this new process to be described as a very important advance in photography. The inventors are Messrs. P. S. Kooistra and C. Dekker, both of Dutch nationality. On the score of cost we are informed that the "Phodeko" process will be cheaper than present methods.

Our own best photographs are the result of rare technical skill and exceptional artistic ability; other people's masterpieces are lucky flukes.

A. SEAMON STER.



"SLENDER TREES WITH TUFTED TOPS"
H. P. WEBB



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Something about Photographic Bookplates

DR. JAMES E. HORNING



HE fashion of bookplates may properly be called ancient, yet, for some reason—perhaps because we are in such haste to make money that we have time only for intensely practical things—here in America knowledge of these unobtrusive works of art is confined largely to artists and a few booklovers who own them. Hence a little explanation for those who have no idea of what is meant by the word "bookplate" will not be amiss.

A bookplate is a label pasted on the inside cover of a book, to denote its ownership, *not* its authorship. One of the illustrations shows a bookplate in a book. They vary in size, the smallest being about one inch square, and run up to as much as six by ten inches. Some institutions and individuals have different sizes, for use in different-sized books. When I was in public school, it was a common thing to write on the flyleaf of our books:

"Don't steal this book,
For fear of your life,
For the owner carries
A big jack-knife."

This was my first bookplate!

I have seen a bookplate which is simply a slip with the following verse printed on it:

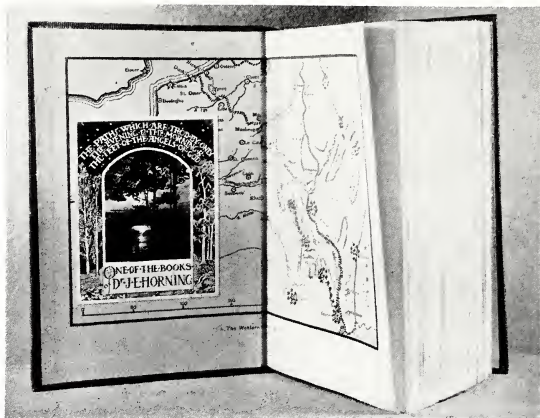
This book I lend to give you pleasure,
To read and ponder at your leisure,
To steal it would be mean,
Turn down no leaves, but treat it well,
Who may next read it, none can tell,
So please to keep it clean,
'Tis lent you for your own perusal,
So please to give a quick refusal
To those who would it borrow,
Your pleasure sated, let it be
Quickly returned again to me,
And thereby keep from sorrow

Yours truly,

JOHN DOB.

Bookplates were probably very ancient; some of the small tablets found in Assyrian libraries are intelligible only as bookplates, and some are attributed to Japan in the tenth century. However, the earliest definitely dated bookplate was made about 1480, and since then the list of artists is a long one, who with infinite artistic style and mood have worked out designs of this kind. There are associations and periodicals the world over devoted solely to the interests of the bookplate, and there are regular "prices current" of bookplates among dealers, and auction-sales as of books. Collections of bookplates, though a modern hobby, have risen to enormous proportions, such as that of the British Museum, containing 200,000 or more, and a number of large and valuable private collections are in existence. Before 1875 these works of art, however rare, were allowed to remain securely within their volumes. But about this date the collection of bookplates became more of a hobby, and with the publication of "Guide to the Study of Bookplates" by the English poet, John Byrne Leicester Warren, afterwards Lord de Tabley, in 1880 many people became interested in this new and fascinating pursuit. In many cases the little bookplate became of more value than the book in which it was found.

The earliest bookplates were almost entirely armorial, emblazoned with crests, and none was complete without its motto. These were, therefore, more an expression of family dignity than of personal taste. Later came the Jacobean, with a heavy carved appearance; then Chippendale, lighter and more airy, with graceful sprays and garlands, etc. About 1770 came the "Ribbon and Wreath" variety, with a shield decorated as the name implies, much more simple and more tasteful. Nowadays the tendency is to simplify the design, and to cut down the inscription to "Ex Libris, John Brown" or "John Brown, His Book", etc. This, of course, does not prevent



BOOKPLATE IN BOOK

DR. J. E. HORNING

the unobtrusive introduction of heraldic devices; but possibilities for variety of style and mood on the part of the artist are greatly increased. There is a bookplate society in England that asks its members to be interested in the Art of the Bookplate, entirely aside from its historical association, to encourage the artists and engravers to produce plates worthy of a place in a good book and to stimulate the desire of all interested to produce original designs of merit and beauty.

Mottoes, hobbies, allusion to personal achievements, portraits, allegorical emblems—such elements with decorative setting form material for individual designs, in which we can get a glimpse of the man behind the plate. There are no more charming examples than those which reflect the owner's love of out-of-doors. Certainly there is plenty of opportunity for an exhibition of poor taste, or a parade of self-advertisement. But if the owner may be too much in evidence, so may the artist, by over-elaboration or objectionable display of his own technique. One does not seek stiffness nor solemnity—some examples, indeed, are quite witty—but a certain dignity is called for. Appropriateness in conception and design, and co-ordination of the different elements into an orderly whole, are necessary, and the final purpose should always be kept in view.

The bookplate is well worthy of consideration as a work of art, especially in its modern mani-

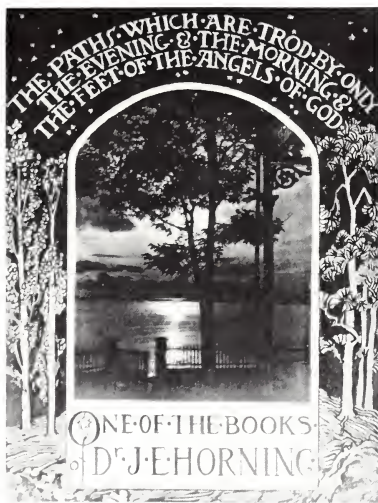
festations. Although the skill and individuality of the artist are eventually the dominating note, it is based, primarily, on the personality of the one who orders it, and should give some indication of the owner's character and inclinations. In fact, this impulse and the pleasure of its artistic expression have led some people to have a number of bookplates. The ideal bookplate is achieved when the personality and ideas of the owner, whether a private person or an institution, are sympathetically expressed by the artist; not only by his skill and execution, but by his choice of a suitable medium and process of reproduction. A bookplate that is distinctively and beautifully your own, and no other's, is a continual joy.

Bookplates are usually first designed and drawn in India ink by the artist, then plates are made therefrom by an engraver. Usually zinc-plates are made from line-drawings, which are not very expensive. Additional prints can be made from these plates from time to time by the printer, as your library increases. Sometimes, a halftone plate is necessary. This is naturally much more expensive; but where the prints are to be made by a printing-press, the final result is what counts.

The reader has probably asked himself before this, "Why does such an article appear in PHOTO-ERA MAGAZINE? What is photographic about this?" Turn now to the illustration that shows

the bookplate with the moonlight-view. The center panel is one of my pet pictures, chiefly because it is one of the best and most artistic photographs which I have ever produced, and partly because of the associations connected with it. The veranda at the right of the picture is a corner of the house in which I grew up, on the shore of Lake Ontario, where I lived from the age of six until I was twenty-two, and which has always been home to me. I had seen a number of bookplates, and had always planned

expressed herself as being very much amazed and delighted with the results I obtained in this way. I do not need to point out the financial saving, nor how much more individual it makes the bookplate, when I have done so much of the work myself. Another advantage is the ease with which I can make several negatives of different sizes to print from. Of this bookplate I have three sizes to fit different books, the largest being 5 5/8 by 3 1/2 inches—excluding a border of about 1/8 inch all around—the next



THE MOONLIGHT-VIEW

DR. J. E. HORNING

to have one of my own some day. I finally got in touch with an artist who makes a specialty of bookplates, and this is the result. The artist said that, of course, a halftone plate would be necessary to reproduce properly the photograph and a zinc-plate would be needed for the border. This would mean a cost of from \$15.00 to \$20.00 for the plates; then, there would be the cost of printing the actual bookplates as well. I persuaded the artist to send me the final drawing, and said I would make a photographic copy of the whole, and make photographic prints. She was very skeptical of this method, but has since

being 3 5/8 by 2 1/4 1/4 inches, and the smallest 2 5/8 by 2 inches. I can honestly say that nothing in my photographic work has given me such lasting satisfaction as this bookplate.

I might tell an interesting detail of the development of this plate. I had hunted for over a year for a suitable motto for my photograph, but without success. When I finally gave it up I wrote the artist that she would have to try to locate a suitable motto, when the very next day, in a novel, I came across the motto I have used. It was quoted by a minister who was standing on a mountain-peak, and referred to

the rays of the rising sun seen over the clouds which concealed the valley below. The moment I read it, I knew that I had found the motto for my picture. How appropriate this is in connection with the moonlight-path on the water! It is a quotation; but the author's name was not given. I would consider it a very great favor if any of the readers of PHOTO-ERA MAGAZINE who might happen to know the author, would inform me of its source.

Many readers will remember that part of this moonlight-picture was honored by being used as the cover-design of PHOTO-ERA MAGAZINE for July 1920, and received a fine appreciation from the Editor. Unfortunately, however, although the motto I have used on the bookplate was sent to the Editor to be used in connection with the picture at that time, it was mislaid and an inferior motto was used.

Bookplates are made so easily by photographic methods that it is also quite a temptation to have a number of different patterns. Vary the design to harmonise with the subject of the book. For natural history works, a photograph that shows some form of animal-life would be very appropriate; for example, the picture of the squirrel. For educational works the design might well include the arms of the owner's school or college, with, let us say, a line-drawing or photograph of some favorite spot among the buildings. For miscellaneous books the ornamentation need not take any definite form, or a more formal bookplate would be very appropriate. The bookplate of the iris—which I consider, incidentally, the finest photograph I have yet made—is my latest; and, so far, only graces one book, a work on Wildflowers, illustrated by sixty photographs from nature.

The simplest way to make one of these ornamental labels is to take a print, trim it so that it measures about 4 by 2½ inches, and paste across it a small slip of paper on which is neatly printed such particulars as name, address and date. Of course, a great deal depends upon the photograph which is selected for the purpose, and the position given to the label. If a pleasing picture is used, and the wording covers up no important part of it, we shall not go far wrong. The squirrel plate is a good example of this style.

When the print is being made especially for a bookplate, it is a good plan to interpose a small piece of opaque paper between the negative and the sensitive paper. Thus we provide a blank space for the name without having to fix on an additional slip, which might easily become loosened in time.

Another attractive form is made by tracing

a design on a piece of transparent paper, or draughtsman's linen, and then printing from it as though it were a negative. The lines on the tracing will come out white on a black ground. They should be printed rather deeply, so as to get good clear blacks. These designs need not be original. All kinds of designs can be found in illustrated books, magazines, and even in advertisements.

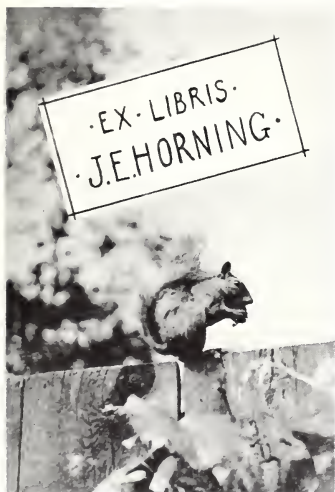
Another way of making bookplates, which have all the appearance of line-drawings, or of delicate pen-and-ink sketches, is as follows: An old bromide print or enlargement is outlined in its main features with waterproof india ink. After being thoroughly dried, it is bleached in,—

Iodine solution, (4 gr. per ounce methylated spirits)	30 minims
Potassium cyanide solution, (5 gr. per ounce water)	5 minims
Water	1 ounce

After all of the original print is bleached away, only the drawing in ink remains. It is then washed, dried, and if more copies are wanted, they may be copied in the camera as usual.

Probably the most useful way, especially where a large number of prints are wanted, and the one I have followed in all three of my own bookplates, is to take a white card, paste on it a suitable photograph, and fill in the surrounding space with a suitable design, together with whatever printed particulars are thought desirable. Copy the whole card in the camera, and make prints from this negative.

A few hints bearing on this work will be useful. (1) India ink should be used, as ordinary ink shows up very feebly in a copy. (2) A card with a yellowish surface must be avoided, as it will produce a muddy effect. A bluish-white color is much to be preferred. (3) Designs need to be kept simple, as for instance in the iris bookplate. (4) Prints to be copied should be on gaslight, bromide, or platinotype paper. Printing-out papers or sepias will not, as a rule, give satisfactory results. (5) In case any readers would care to know my technique in copying, I may say that I use Eastman Portrait film if I wish to preserve intact, or reduce the contrast, of my original, with a soft-working portrait developer. To increase contrasts I use Eastman Commercial Ortho films, with the Imperial Standard developer. Intermediate results can be obtained by using a soft developer with the Ortho film, or the Imperial developer with the Portrait film. I have rigged up a box to the back of which I fasten the subject to be copied, well in front of which there is a 40-watt tungsten lamp at each of the four corners. This gives a perfectly even illu-



ONE OF THE BOOKS OF




DR. JAMES E. HORNING

THE SQUIRREL BOOKPLATE
 THE IRIS BOOKPLATE
 DR. JAMES E. HORNING

mination, and there is never any trouble with the grain of the paper showing up in the copies. It is hardly necessary to say that the lights are shaded in such a way that no direct light from them shines on the lens, even when I am copying vest-pocket prints direct to 5 by 7 size.

How Pyro is Obtained

LL who are close observers have often seen swellings or excrescencies on the branches of some species of trees. These growths are hard and have a rough surface. Whether found on fruit or shade trees, on the trees of the field, the trees of the forest, or on the rose-bushes in our dooryards, they are all due to the same cause—the puncturing of the branch by an insect which deposits an egg in the soft tissue which underlies the bark.

The insect wounds the tree and introduces an unwelcome guest into the wound. In seeking to repair the damage, the tree builds a prison around the intruder, which happens to be just what the intruder needs; for after it has hatched from the egg, the material of which the prison is composed supplies it with food until it has attained a certain stage in its development, after which it cuts through the prison-wall and rounds out its life in the open air. These excrescencies are known as galls, and when they are especially rich in tannin, as are those on the oak and sumach, they have a commercial value.

For many years, these galls have been exported from Asia Minor and the East Indies. At the present time large quantities are also being shipped out of China, and it is from these galls that pyro—which has those peculiar properties possessed by no other developing agent—is made. In the manufacture of pyro, the galls are ground and are then placed in water, in large vats, where they are allowed to ferment for several weeks. After the alcohol acid and other products of fermentation have been removed by applying pressure, in a press that somewhat resembles an ordinary wine-press, the residue is transferred to tanks where it is dissolved in boil-

If I have inspired any of my readers to efforts along this thoroughly artistic line, and they achieve results which give them as much pleasure and satisfaction as these bookplates have given me, the purpose of this article will be fulfilled.

ing water. The liquid thus obtained is drawn off, boiled down and cooled, gallic acid crystals being formed as the temperature lowers.

After the crystals have been separated from the liquid, they are again placed in water and boiled under pressure, the gases that form during this boiling-process escaping through safety-valves that are provided for the purpose. The mixture is then placed in drying-pans and after all the moisture has been evaporated, the residue is worked in jacketed stills to obtain the pyro crystals. The crystals that are taken from the stills are in large lumps which are ground to form the crystal pyro that is furnished by dealers.

Before the war, most of the pyro that was used in the United States was manufactured in Europe; but during the late war it became evident that America must either manufacture pyro in large quantities or get along with the restricted supply that Europe could furnish.

Pyro is only one of the essential chemicals that the late war made scarce and expensive. To meet this emergency, the Eastman Kodak Company enlarged its chemical plant to include the manufacture of pyro and produce it, in spite of great difficulties, in exceptional purity and at a price that was low compared with the cost of other developers.

Eastman Crystal Pyro is, as its name indicates, pyro in crystal form. It has, grain for grain, the same strength and, consequently, the same developing-power as the older form of resublimed pyro; but, unlike the latter, it will not fly about like dust and settle down, where it might come in contact with films and prints. It is one of the Eastman Tested Chemicals and it is the pyro that is used in the Kodak and Premo Tank-Powders.—*Kodakery.*





PYRO IS KING

DRAWN BY EDWARD H. GARRETT



"THEY VARY IN SHAPE"

H. P. WEBB

Trees that Shed their Bark

H. P. WEBB

IN California trees don't shed their leaves; they shed their bark. The writer, as a boy, had often heard this remark, but he had heard so many California stories that he simply regarded it as a "whopper" for which he believed Californians to be famous. It was not until he had come to the "Land of Sunshine" and had seen the eucalyptus at close range, that he realised that, at least so far as that remarkable tree is concerned, the statement is indeed literally true.

After an enforced vacation of several years, due to the war and its after-effects, the writer has attempted recently a "come-back" and has returned to his first love, the camera and things pictorial. He got out his old photo-magazines and annuals, the one class of periodicals which are never destroyed no matter what else may go, and looked them through for inspiration, as to pictures of trees and things woodsy.

He found, in several dozen magazines and a half score of annuals, impressions of what seemed to him almost every tree on earth, save only the eucalyptus. This alone seemed to have been ignored. But, at last, he came across a study of the familiar trees, one that might have

been made in almost any one of a thousand places in Southern California, a close-up view of a typical row of eucalyptus, portrayed in what might well be the balmy atmosphere of this favored section. The nearest tree shows plainly a number of strips of bark, curling gracefully away from the tree-trunks, during the process of shedding. The title accorded this tranquil scene is "After the Battle with the Storm King"; as though they were mighty oaks, which though they had withstood the onslaught of the tempest, had had their bark torn to shreds in the conflict with the furious elements.

After all, how little we know of the great world, save only that which immediately surrounds and concerns us. The writer's children, natives of the Golden State, were recently very much interested, though somewhat incredulously so, in a series of pictures of the beautiful designs of frost upon the window-panes. One of them, a high-school youth with the usual proclivity to slang, remarked, "How can it was!"

Perhaps the youth and not a few elders of more vigorous climes may be skeptical as to this annual bark shedding of the eucalyptus; but the writer wishes to assure them, that although he lives in Hollywood he has used none of the tricks



SEVERAL TREES IN ONE

H. P. WEBB

of the movies in portraying this feature in the accompanying illustrations. The bark hanging from the trees, or strewn upon the ground, is just as nature intended and not the result of storm or other unusual occurrence.

Although not a tropical tree, the eucalyptus does not withstand many degrees of frost. Otherwise, it is a hardy tree, vigorous and rapid growing, seemingly immune to attacks from parasites or disease. There are several hundred varieties, of which more than a hundred are said to be found in Southern California. The blue gum is the most common, and in many localities it dominates the landscape. In Australia many specimens of eucalyptus have attained a height of over four hundred feet, the highest, though not the largest, trees in the world.

Introduced into California only about half a century ago, none of them have attained nearly their full growth, nevertheless there are many

trees already one hundred or more feet in height and perhaps eight feet in thickness. In shape they vary greatly, sometimes weird and fantastic but always picturesque. More commonly, they are tall and slender trees with tufted tops. A row of these silhouetted against the sky presents one of the charms of the southern landscape.

Perhaps no other tree has ever been put to such a great variety of uses. Its wood is valuable in many lines, from ship-timber to railways. Eucalyptus wood, also, takes a high polish and has many ornamental uses. It is valuable as firewood, and when the trees are cut down several main trunks grow rapidly from one stump. Planted close together, they form an excellent wind-break. They are useful in reforesting denuded areas in semi-arid regions, and where planted in swampy lands, they do much to eliminate malaria. Eucalyptus oil is almost indispensable in medical circles; and, last but



GROUPS OF EUCALYPTUS

H. P. WEBB

not least, the pods of the tree are extensively used in making ornamental(?) portières.

In photographing the trees the writer has obtained his best results in the late afternoon, when the shadows are long and the sun breaks through, lighting the lower branches and the trunks of the trees. This is especially true when close-up views are made. Then, the most important item is the play of light upon the trunks.

As a general rule he endeavors to have the sun light up about two thirds of the trunks, although pictorial results may be obtained by having just an edge of sunlight, the remainder of the tree being in quite deep shadow.

A three- or five-times filter should be used generally, although on some afternoons the mellowness of the sunlight, during the hour preceding sunset, enables one to dispense with the filter.

Plenty of exposure must be given. It is difficult to suggest how much, because the quality of light varies so. Using stops F/6.3 to F/8 the writer gives exposures, seldom as little as one

fifth of a second, up to one second and even more without a filter, multiplying that, of course, by the required number when the filter is used.

In this work he seldom stops his lens below F/8 and prefers F/6.3 or F/6.8. He believes to stop the lens down to F/16 or F/32 gives usually a sharpness that is unnatural. He believes the nearby objects should be focused fairly sharp—that is the way the eye sees it—and that the focus on distant objects should be a little soft, though never blurred.

[The seeming contradictions and oddities in what we call natural phenomena in different parts of the world always make interesting reading to those situated elsewhere, as Mr. Webb shows by his frost story; but more so when illustrated as admirably as in the present instance. We have used one of the most beautiful of Mr. Webb's pictures which accompany this article for a cover illustration and frontispiece in this issue.—EDITOR.]

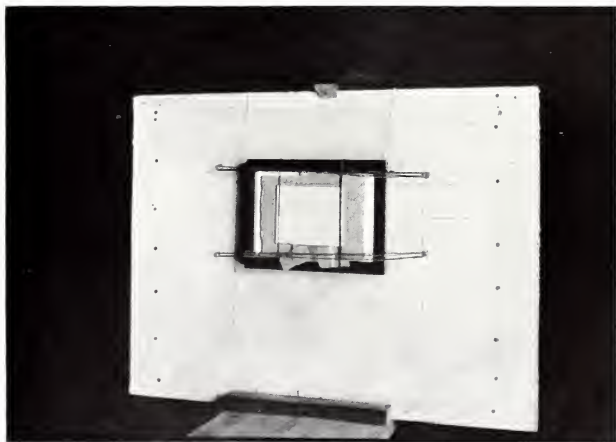
Lantern-Slides and Stereo-Positives

ROY L. CLINE

IT may be of interest to some photographic workers to read an account of how one of the "fraternity" happened to begin lantern-slide making and some of the things that he experienced after doing so. We are all familiar with the saying that, "Some are born great, some achieve greatness, and others have greatness thrust upon them." Lantern-slide

were Kodak pictures and that he could get some printing and enlarging to do. When he found that stereo-positives on glass were wanted, he began to "back down"; but upon second thought—he needed the money and saw that the profit would be greater—he decided to attempt it, as the experience would be interesting, even if he failed to make good on the job.

A special printing-frame was ordered which



METHOD OF HOLDING PLATES

ROY L. CLINE

making was literally thrust upon this worker that I am writing about and as he was inclined to experiment and disliked to admit that he could not do anything photographically that others were doing, he decided to make an attempt. An acquaintance, who owned a 45 x 107 MM stereo-camera, had spent several months in Europe and had about six hundred negatives, some made on board ship and the remainder made in England, Scotland, France, Italy, and Belgium. They were developed and printed *en route*, and most of them were properly exposed and developed in good shape.

The amateur decided to see this acquaintance upon his return, with the hope that the pictures

provides for reversing the picture when printing. These frames are extra long and have an opening the size of the picture in the center of them. In stereo-work, it is necessary to reverse the pictures; that is, the left picture on the negative must be printed on the right end of the plate and vice versa with a line dividing the two. This applies only to glass-positives as prints can be made on paper by regular contact printing, then cut apart and reversed at the time of mounting on a card. These special frames are made so that when the negative is slid to the extreme left end and the plate is slid to the extreme right end of the frame, they are in the correct position over the opening in the center for reversed printing. The



FIXING-BOX AND TRAY

ROY L. CLINE

exposure is made, the film is slid to the other end of the frame, bringing its left end over the center opening of the frame, the plate is likewise reversed, bringing its right end over the opening, and the second exposure is made.

This frame was laid on the glass-top of an ordinary printing-box, the glass-top being about two and one-half inches above a groundglass which covered the lights. The space between was filled with sheets of white tissue-paper to reduce the volume of light, the required number being found by test, and the exposures were timed by counting the ticks of the old reliable kitchen-clock, the light remaining the same but the exposure being varied by giving more or less time as the density of the negative required.

Ilford Alpha plates were used to begin with and the developer used was the regular caustic-soda—hydrochinon. The first plate was exposed and development watched eagerly. Nothing happened, it just naturally failed to develop. Another was tried with the same result. The cause of the trouble is still a mystery; but it was thought that the caustic soda was defective. At any rate, after a few suitable and timely remarks, some Elon-hydrochinon stock-solution for Azo paper was diluted with twice the usual amount of water and that particular trouble was ended. This developer has been used from that

time on with varying degrees of dilution, and has given entire satisfaction. The plates developed the first evening were all overexposed and underdeveloped and were a failure. The next attempt resulted in a batch of underexposed and underdeveloped plates which were also failures.

The next move was to write to the Eastman Kodak Company and get their booklet on Lantern-Slide Making, which is one that every photographer should own and costs nothing. After this was received, it was found that the plates were being underdeveloped and by further reducing the light and giving proper development good results were obtained. About this time the supply of Ilford Alpha plates gave out and Eastman Standard and Standard Slow were tried. They were easy of manipulation and were satisfactory in every way and have been used exclusively since. They give good blacks and the Ilford Alpha has a brown tone. Either plate is good, the Ilford plates being more expensive, as they are imported from England.

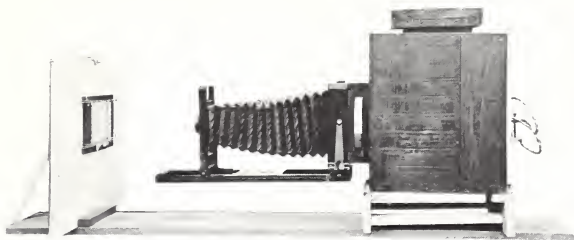
The entire lot was finished at a good profit plus some valuable experience and the owner is now using them for two purposes, for viewing through the stereoscope and also for lantern-slides. Some illustrated lectures were given and these small positives made fine pictures when projected on the screen with a good lantern.

About this time, some other people returned from a nine months' trip abroad. They had a large number of negatives made in Canada, Philippines, China, Japan, Korea, Egypt, and India. They attended one of these lectures and were immediately seized with a desire to have their pictures made into lantern-slides. The amateur received this work unsolicited, the quality of the first job caused inquiry as to who made the slides, and so this worker who was at first afraid to attempt it suddenly found himself with a reputation. This should teach a lesson to those who are afraid to try something new.

It was decided that the second job would be

using the extension-bed on the camera the bellows could be racked out sufficiently to do the work. That this discovery caused profound satisfaction you may well believe.

The next thing was to figure out a scheme to hold the plate on the easel. For this purpose it was necessary to use something that could be moved quickly up and down or sideways or partly revolved. It is timely to remark here that this last batch of films contained very few good examples of photography. A great many were out of focus, buildings and water-scenes were on the slant, and nearly all were underexposed. The development was done *en route*; and, at each



THE ENLARGING-OUTFIT

ROY L. CLINE

regular lantern-slide work, using standard-sized plates, masks, and cover-glass, and the slides were to be varnished with lantern-slide varnish. The first difficulty was struck when the worker found that contact printing could not be employed, as the pictures were all on larger-sized films, $2\frac{1}{2} \times 4\frac{1}{4}$, $2\frac{7}{8} \times 4\frac{7}{8}$, and $3\frac{1}{4} \times 5\frac{1}{2}$ and would have to be reduced to make slides.

His nerve being in better shape by this time, on account of his former success, he took the order of four hundred and sixty slides, intending to make them by projection, although he did not know whether his enlarging-outfit would do the work or not, as he had never before made slides by this method. The enlarging-outfit was a 5 x 7 view-camera fastened in front of an opening in a box that contained a 200-watt Mazda in a Paralax reflector with groundglass-diffuser between reflector and negative. It was found that by

stop, the person that did the work apparently had a different idea of development. Some of them were overdeveloped and blocked up, others too thin, some were stained, some had never fully cleared up in the fixing-bath, and others were covered with large spots of a white chalky substance which dissolved in a fresh fixing-bath, but left spots that showed less density than the rest of the film.

After considerable thought, a scheme to hold the plate was evolved, which was extremely flexible of adjustment and very simple. A 5 x 7 printing-frame was suspended against the easel by weighted strings which were fastened to the two top corners of the frame and passed over the top of the easel, the weights hanging down behind. This allowed the frame to slide up and down and also sideways by moving the strings hanging over the top of the easel. After a trial,

this was further improved upon by stretching rubber-bands across the top and bottom of the frame to hold it tight against the easel and keep it from moving after being adjusted. The rubber-bands were fastened to the easel by glass-headed push-pins which could be quickly and easily moved. The glass was taken out of the frame and a piece of mat-board placed therein. A short piece of this was glued across the bottom of the board and formed a support for the plate to rest upon. Rubber-bands were then stretched over the frame and adjusted to pass over both ends of the plate outside of the picture-space. This allowed quick placing and removal. This was necessary as an old undeveloped plate had to be used to focus on and for adjustment for size of image, then taken down and replaced with a fresh plate each time an exposure was made. (The first picture illustrates this.)

In order to correct pictures that were made carelessly by not holding the Kodak level, it was necessary to partly revolve the frame so that the image would be straightened on the plate, and later masking out the parts not desired. This could also be corrected by adjustment of the film in the carrier; but it saved time to have things arranged so that either could be done. The rubber-bands across the top and bottom of the frame held it tight against the easel in any position and adjustments were quickly made.

The stereo-positives were fixed by placing them in a frame set in a tray; but for the lantern-slides it was necessary to make a fixing-box and frame which was done in a couple of hours. A box was made and lined with oil-cloth and had a capacity of thirty slides, which was all one cared to turn out in one evening. (The second picture shows method of fixing.)

This entire job was handled with the outfit shown in picture 3 and with a loss of not over three dozen plates. Before it was completed, some warm-weather trouble was encountered, reticulation of the gelatine on the plates taking place. This was overcome by setting the tray that contained the developer in a larger one of cold water, and keeping the water cool by using a little ice. The plates were also laid for a short time in a chrome alum hardening-bath, between development and fixation. This bath was made up of water 64 oz., chrome alum $2\frac{1}{2}$ oz., sulphuric acid C.P. 5 drops, and is fine for plates and films during hot weather.

Although a little off the subject, it might be mentioned that this worker found that the bellows of his camera leaked light at several of the corners. He discovered it one night when it was racked out at nearly full extension and the light shot through on the inside. It had not

caused trouble before because it was normally used at short extension and the folds of the bellows were nearly closed. You might test your bellows before using it at full extension.

A Few Hints

Length of exposure on lantern slides must be learned by experience.

Develop till the highlights are veiled over and begin to look decidedly foggy. This clears up in the fixing-bath. A little experience teaches how to judge this.

More brilliant slides are obtained by slightly overdeveloping and later clearing up by taking them directly from the fixing-bath without rinsing, and placing in a tray of water that contains enough ferricyanide of potassium to make the solution lemon-colored. Only a short time in this bath is necessary, then wash thoroughly. Rock the tray while reducing.

After washing, each plate should be carefully swabbed with wet cotton to remove sediment or other foreign matter.

To some extent, short exposure and long development increases contrast, and long exposure and short development decreases it.

The acid fixing-bath as recommended for paper was used.

A ruby bulb, covered with one thickness of ruby paper, was used for a room light and regular safe-light with ruby glass only was used close to the developing-tray. Some recommend yellow or orange light for this; but red was thought to be safer and gave all the light necessary.

Develop from two to three minutes.

Observe the first two or three slides after fixing out to see if correct density is obtained.

Proper density is best judged by trying the slides in the lantern, after drying; but, after a little experience, the slide-maker can judge this by looking through the slide after fixing, using reflected light from a white paper or wall.

To prevent the film from absorbing moisture in damp weather, thereby causing condensation of moisture on the cover-glass when the slide is heated in the lantern, the slide should be varnished with lantern-slide varnish. This is transparent and is flowed over the face of the plate. It dries quickly and forms a protective coating.

Mats are purchased or cut to fit the picture.

A cover-glass is bound in contact with the film-side of the plate by strips of gummed paper made for the purpose.

A white sticker can be placed in one corner of the slide to serve as a guide to the operator when inserting the slide in the lantern. This sticker can also be numbered so that it can be shown in the proper order for travelogue-work.

Which Shall It Be?

William Ludlum

"Which shall it be? Which shall it be?"
This is a sorry day for me.
My wife has said that—"I must part
With one,"—but just where shall I start?
She claims, "They take up too much space!"
And tells me so—right to my face.
So, to prevent a family-row,
I'll make selection, here and now!
"Which shall it be?" Now let me think.
Who at this bitter cup must drink:
My V. P. K. is such a mite
I think I'll tuck it out of sight,
I'll pocket it in some old vest
Where it can safely bide at rest.
My Junior Kodak? Nix! and no!
I surely cannot let *you* go.
My postcard-size? My four by five?
No! not from either, while alive!
My five by seven? Eight by ten?
You take up room, 'tis true, but then
The space you occupy is worth,
To me, much more than all the earth.
My first love? Little battered box,
So worn by thoughtless blows and knocks?
The last—but first I ever owned—
I could not sleep, with you—disowned!
And so I pause. "Which shall it be?"
Each one is surely part of me.
Shall I discard this one, or—that?
Or chance another family-spat?
Ye gods! I cannot make a choice.
Have I, in matters such, no voice?
"Which shall it be?" It shall be none!
I'll hold to each and every one!
From battered box to eight by ten—
I'll prove that I'm a man of men!
My wife can stack her hats away
Beneath the ice-box or buffet;
Can hang her skirts on tree or fence.
But—not a camera shall go hence!
I'll brave her wrath, but, large or small,
Not *one* shall go. I'll keep them all!

Some Easy Lessons in Composition

WILLIAM S. DAVIS

Part One

THE average amateur fights shy of pictorial composition for two reasons. First because of the idea that it is too complicated a subject to look into. Second, that knowledge of composition is not called for in ordinary snapshot work, so had best be left entirely to the "high-brows" who go in for art with a big A.

The correctness of the first supposition depends entirely upon how deeply one delves into the matter. Knowledge of the many fine points of composition is, of course, acquired only by careful study and long practice; but the more elementary rules are simple enough to be grasped quickly by any one who does not possess a general knowledge of art-principles, for the reason that they do not rest upon abstract theories or dogmatic opinions of a few men, but constitute a commonsense summing-up of practical experience in visual expression of countless workers.

As to the second idea—that regard for the rules of composition is unnecessary in pictures which

are not intended to be artistic—we can only express the opinion that this is a mistaken view to take, since application of even the simplest rules, when making a snapshot, will certainly help to "put the idea across"; in other words, render one's impression of the subject more forcefully than would otherwise be the case. This is due to just the same reason that a good command of the written or spoken word enables an individual to describe a scene or event more concisely and lucidly than can be done by another who lacks this knowledge and has to grope for expressive words and then forms them into halting sentences.

Due regard for fundamental principles of composition makes for concise and orderly expression of an idea, as well as pictorial beauty, both of which the reader will doubtless admit are desirable qualities to attain even in casual picture-making. Why this should be so, and the main points required to make one's work measure up more closely to such a standard, we will try to explain as clearly as possible in the following lessons.

Lesson I. In Divided Interest

Don't try to tell two stories in one picture. This is not only an old rule, but a sound principle which cannot be disregarded without spoiling the effectiveness of the result, for the reason that the mind cannot grasp perfectly several ideas simultaneously, and in an endeavor to do so all impressions become more or less blurred, the observer being left in doubt as to what the picture is intended to express. Before making an exposure, ask yourself what is the feature which attracted your attention to the subject. In the case of figures, animals, or most nearby objects, there is no occasion for doubt on this point; but when dealing with more extended scenes, this is not always true. For example, where figures or animals appear in a landscape, one should determine whether the landscape shall simply constitute a setting for the figures, or whether the latter are only incidental details. If the figures are considered the attraction, the landscape-material chosen should be sufficiently simple in character, that it does not contain strong counter-points of interest to draw attention away from the figures, even though the latter do not fill a relatively large area in the picture. On the other hand, when the figures or animals are thought of only as accessories, they should not be shown on too large a scale or be placed very far away from the

real focal point of interest in the landscape. In pure landscape, the point of interest may center upon a tree of noticeably individual character, a clump of trees forming a connected mass; the line formed by a roadway or bank of a stream leading the eye along, or merely a transitory effect of light and shade which emphasises some part of the picture for the time being.

Having determined what constitutes the leading feature, look for a viewpoint which will give it due prominence and render surrounding parts, or the background, subordinate. While a photographer, like the painter, cannot omit objects or details which detract from the general effect, he can nearly always find a viewpoint from which such features are hidden, or at least made unobtrusive. In this connection, one should keep in mind the value of utilising the varied effects produced by the change in light and shade at different hours, together with the value of mist as a means to veil distant parts which at ordinary times stand out too insistently. Light is a great accentor, whereas shadows produce the opposite effect; so if it is possible to be on hand when the light and shadow is just right, an otherwise commonplace scene may be found quite transformed in appearance and character.

Once the best viewpoint for the leading feature



FIGURE 1

SOME EAST LESSONS IN COMPOSITION

WILLIAM N. DAVIS

FIGURE 2



FIGURE 3



FIGURE 4

SOME EASY LESSONS IN COMPOSITION
WILLIAM S. DAVIS

has been determined upon, it is an excellent plan to consider how much of the surrounding material can be excluded without unduly crowding the image of the principal portion within the boundaries of the picture. Everything which does not contribute to the pleasing appearance of the feature around which interest centers, or in any way make clearer the idea one wishes to express, should be kept out of the composition as far as possible, as simplicity adds to the effectiveness of the result in the same way that a thought expressed in a few well chosen words will be remembered, whereas a lengthy discourse leaves but a vague impression. If this treatment requires the exclusion of material which is itself interesting, though unrelated to the main feature, utilise it for other pictures.

The proportionate space which is taken up by the principal object in the picture may vary a great deal, according to the character of the subject and the desirability of the surrounding material as accessory elements. In the case of a single figure or a group, for instance, one would expect it to fill a relatively large amount of the space. On the other hand, the point of interest may come to a focus in the middle-distance, or even the distance, of an out-door scene instead of the immediate foreground; though when this is true it will be found that the eye is unconsciously led up to such point by the contributory char-

acter of the intervening objects. But more of this, hereafter. Contrast of tone is a strong factor in attracting attention to a given spot, the eye going at once to a white cottage in the distance seen against a background of foliage, or, in a water-scene, to a vessel standing out as an isolated object upon the expanse of water. So you see the size of the object or part of greatest interest in relation to the rest of the composition is a matter to be decided according to circumstances and not by fixed rules.

Fig. 1 is an example of the kind of divided interest often found, in one form or another, in casual snapshots where the worker was undecided as to just what constituted the element of greatest interest. As here shown, the two largest trees form conflicting points of interest, being of equal importance as to size and tone, and so separated that the eye wanders from one to the other. In a subject of this kind, it is sometimes possible—by changing the viewpoint considerably—to bring the competing objects near enough together to constitute a united group, or mass; but where this cannot be accomplished satisfactorily, one or the other object must be excluded to obtain unity of interest. In the example before us, the latter method was adopted, by omitting the tree at the right, which left the eye free to go directly toward the other and rest upon it, the result appearing in Fig. 2.

Lesson II. Placement of the Principal Object

Having explained in the previous lesson the importance of concentrating the interest, we will now consider the proper place of the principal object in the picture space. The one rule which cannot be broken without injuring the effect is—*Don't have the main feature in the exact center of the picture.* This seemingly arbitrary rule is based upon the fact that the attractiveness of a composition depends to a considerable degree upon breaking the uniformity of spacing; and if the main feature is surrounded by an equal amount of space on each side, or above and below, a feeling of mechanical symmetry is produced, and the effect rendered stiff and monotonous. By placing the principal object somewhat off the center, the rest of the picture is broken into unequal areas of shape or tone, which adds to the interest and makes the resulting picture appear more spontaneous.

For the same reason, the sky-line should not divide a picture into exact halves, such being most unpleasant in the case of an open landscape with an almost horizontal sky-line, or a marine where the horizon constitutes the dividing line.

In subjects of this character, let the sky-line come either below or above the center of the picture, the relative space allotted to sky and foreground, respectively, varying according to conditions. Usually, the effect is agreeable in the case of an open scene when this line is situated either one-third or two-fifths of the distance from the bottom or top margin of the picture.

Aside from this one negative injunction, there is no hard and fast rule for placing the principal object, though it is not well to go to the opposite extreme and have it close to one margin, as this draws the eye so far to one side as to create an unbalanced feeling and lead out of, instead of into, the picture.

When the interest focuses upon an isolated object, or one which by contrast stands out with unusual prominence from surrounding material, its location is rendered more than usually important. If a moving object, it is considered best to allow more space in front than back of it, as this gives the feeling there is room enough for the object to move freely. The term "object", used in this sense, is applied to any connected group

as a whole, even though the interest is focused upon a single unit of the group. In a railway-train, for example, the locomotive would be the focal point, no doubt; but in placing it in the picture, one would have to consider it a part of the train as a mass; consequently, if more space were allowed in front of the locomotive than to the rear of the last car, the effect would be in accord with the suggestion already made, although such an arrangement would probably place the locomotive past the center in the picture.

The height of the principal feature in the picture-space is not governed by fixed rules, but is best determined by good taste in relation to its character, and the effect one wishes to convey. In a sitting figure, for instance, lack of sufficient space above may give the impression that the subject would bump its head on the top boundary of the picture in case of rising, whereas in a study of a full-length standing figure the space above has much to do with conveying a truthful idea of the person's height. From a practical point of view, it is often well to include a little more material all around than seems necessary; then trim, until a satisfactory effect is arrived at.

In a marine-view it is not well, as a general thing, to let the horizon-line come above the

middle unless the interest centers upon some low-lying object in the foreground; for the reason, that it is difficult to make the surface of a body of water appear to lie on a horizontal plane, when it fills a large part of the picture. On the contrary, a high sky-line helps to give the desired impression in the case of a mountain-scene or a landscape consisting of rolling hills.

Fig. 3 shows a marine composition in which both the sky-line and vessel are badly placed, the former cutting the whole into two equal oblong areas of light and dark tone respectively, while the vessel is directly in the center. These errors are both corrected in Fig. 4, the result depending simply upon how the prints are trimmed. The lowering of the sky-line in the second illustration gives a more natural impression of the relative amount of sky and water seen in nature when the interest is concentrated upon a fairly distant object on a level with the spectator, besides reducing the amount of relatively unimportant matter between the schooner and the spectator. The additional space, ahead of the craft, conveys an idea of its coming into the picture, instead of being about to pass out of range, and at the same time cuts into the area of the sky in a more pleasing manner.

Lesson III. Balance

The fact that the principal object should not occupy the exact center of the picture naturally brings up the matter of balancing it, since it often comprises the most prominent mass of tone in the composition.

When placed quite close to the center, the need of aid in maintaining balance may not be felt; but in cases where a large mass of either light or dark tone lies well to one side, or frills a corner, the result will be sure to look "lop-sided", unless counter-balanced by a suitable spot of tone in another portion of the picture-space.

A mechanically balanced effect is produced when objects of equal size are situated upon opposite sides, equidistant from the center, such treatment being comparable to a "see-saw" pivoted in the center and kept level by objects of equal weight at either end. This method is adapted only to formal decorative compositions, however, as the result is not in keeping with the variety and spontaneous effect of grouping associated with the general run of subjects.

Unsymmetrical balance, on the other hand, looks natural and informal, one of the simplest ways to obtain it being to think of the center of the picture as the fulcrum of an imaginary "see-saw", and the objects of different size on either

side as varying weights which must be so distributed as to keep this level. As every one knows, a light weight can be made to balance a heavy one by moving it enough further from the center than the heavy one, so that it will exert greater leverage upon the fulcrum. The same principle works out in practice when dealing with the distribution of objects in a composition. Figure 5 illustrates this point, the small, dark mass near the right margin acting as a counterpoise to the large mass just to the left of the center. Figure 6 shows another way to utilise the same principle when parts of a subject fall into triangular, or wedge-shaped, masses. In this instance, the tree-lined bank of the pond constitutes the main feature. This, however, takes the form of a wedge, which character is emphasised by the reflections, the thickest side being at the right-hand end. To offset this, a position was chosen which would show a portion of the near shore as a triangular mass in the lower left corner—the thick side of this wedge being upon the opposite side from the other.

Taking the matter a step further, attention should be called to the fact that a larger spot of moderate tone will act in a similar manner to a smaller one of darker tone; consequently, to



FIGURE 5



FIGURE 6

SOME EASY LESSONS IN COMPOSITION
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provide a balancing note, it is not needful to look for an object of the same tone as the principal mass. A lower corner containing a dark mass, such as might be produced by heavy foliage or a rocky shore, can be balanced perfectly by a strong cloud-formation filling the opposite upper corner, and when the entire foreground is such as to form a dark base to the composition a larger area of moderately light tone filling a good part

(To be concluded in the November issue)

of the remaining space above will restore the balance. Reversing the application of this principle: the top-heavy feeling caused by a large area of quite dark tone, situated above the middle of a picture possessing a foreground which is mainly light in tone, can be overcome by the introduction of a comparatively small spot of decidedly darker character than anything else well below the center of the picture.

Photography for a Living

SIGISMUND BLUMANN



MAN may do what he desires when the recompense shall be his being pleased; but when he does it for money, he must bend to the will of the payer. He may enjoy making good pictures or poor ones, may be an artist or a snapshooter; and, in either status, hold himself beyond criticism so long as he accepts no pay. When dollars change hands, it is thereby constituted a business-transaction and becomes subject to the prime law of business—satisfaction guaranteed. This sounds hard, sordid; but it is fact. As hard as rock—the rock on which the keel of many a photographer's ship has grounded and gone to pieces. Does this mean that the artist must prostitute his talents to bad taste and cater to the vulgar? It need not. That depends on what he is striving to get. If it be the approbation of posterity and of a small cotemporary clientele, let him follow his own bent to the exclusion of all else; but should he desire to get the money of the realm and prosper materially, he will have to conform, modify, adapt—in a word, strive to please, as the saying goes.

Nor need he stoop too low even in this. Popular demand is not necessarily for the inferior. In fact, it is not nearly as bad as our long-haired radicals would have us believe. The general class, common folk, as you will, may appreciate the beauty of the clouds that variegates the azure overhead for all that they insist on keeping their feet on solid earth. The people at large may not be so ignorant of Art—with a capital "A" please—as they are accused of being, although they refuse the tear-producing, cock-eye effects of the ultra-diffusionists. This will apply especially to portraitists.

An ordinary family, with ordinarily good taste and average culture decides to have their pictures made. Shall the photographer insist

that they accept what he arbitrarily rules is "first-class portraiture" or may they have what they want? They do not want slab-sided lighting, nor blotchy shadows, nor freaky highlights, nor fuzzy-wuzzy outlines, nor sloppy mounts, nor a dozen other things which yesterday's amateur, gone into to-day's profession, puts before them as artistic. They do want that three-quarter lighting which shows them as their friends commonly see them, they want a clear, clean image that doesn't strain the optic nerves, they want a mount that can be stood up or mailed without unusual resources and complicated manipulation. The average man will not bother with complex things.

We have specialists in sepia, in steel-blue, in extreme lighting, in flabby mountings, in imitation gum, in pale-gray, almost platinum-tones, in diffused focus and what not else. In the name of common sense, let us have specialists in common sense. Let us have more photographers who can and will make an honest-to-goodness portrait. The amateur, as an amateur, has done more than he ever will be credited with in the interests of photography; as a professional, he has much for which to answer. And much will be and is being said to him. It is expressed, not so much in words as in a gradual decrease of custom. Faddists are not only comparatively few, but their fads are ephemeral. They are poor customers. Strauss, Garo, Hoyt,—these are artists with a studied knowledge of real art; yet their masterpieces of portraiture are quite conventional in those elements which the amateur-professionals revel in outraging. There is no pocsy in this. It is meant to be a business-talk. If you are selling pictures, know Art, practise Art, deliver Art; but do not confound Art with Oddity. Selling portraits is a profession; a profession is a trade; a trade is a defined practice, not a debauch.

A Removable Kit for the Printing-Frame

A. D. DuBOIS



VERY satisfactory and convenient "kit" to hold small glass-negatives, in a printing-frame of larger size than the plates, is constructed easily out of a cigar-box lid and a piece of cardboard as necessary materials.

Referring to the accompanying illustration, a cardboard-mat, A, is selected of the same thickness as the glass-negatives and a rectangular

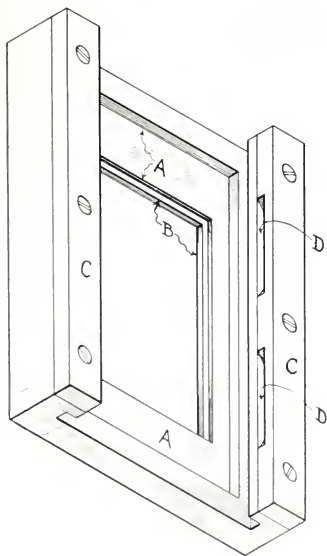
film-surface of which will be flush with the cardboard-surface. The width of the rabbet need not be more than one-sixteenth of an inch, so that virtually the entire negative can be printed. If the wood should give trouble by warping, a cleat of the same material may be glued across each end, on the under side, in such a manner as not to interfere with the frame; but this is not usually necessary.

Such a kit, to accommodate $3\frac{1}{4} \times 4\frac{1}{4}$ or 4×5 negatives in a 5×7 printing-frame, is easily made and is a great convenience to print postcards or to make prints with wide white margins. It is especially convenient when printing tinted borders, by double-printing, as it holds the negative exactly in place without difficulty, if the kit has been made carefully. The opening in the kit may either be central or placed nearer one end; the latter being suitable for vertical prints, such as portraits, with the wider margin at the bottom of the print.

For printing postcards from 4×5 negatives, using a 5×7 frame, a mask should be cut from a 5×7 sheet of post-office paper, or black paper—having a rectangular opening as long as the opening in the kit, and as wide as the postcard, minus the desired white margins. A distinct outline of the size of the postcards should be drawn with pencil or ink on the mask, to serve as a guide in the placement of the cards for printing. With this combination the negative is held rigidly in place by the kit, the mask is held in place because it just fits into the printing-frame, and the postcards can be registered quickly by the guide-lines on the mask.

A kit of this kind does away with the nuisance of a small negative slipping about on the usual printing-frame glass, which it is apt to do if centered merely by a loose cardboard mat. It also obviates the danger of breakage which sometimes occurs when one sheet of glass is pressed against another, if the glass is not flat.

If a professional printing-frame is used, the thickness of the kit will not cause any difficulty in the operation of the springs, as it will be deep enough to accommodate the cigar-box wood plus the thickness of the glass-negative. If an amateur frame of the usual construction is to be used, either with this kit or with a glass to support a smaller glass-negative, it will be easy to remodel it by fastening to the back of the frame, with wood-screws, two strips of wood, C, C, in which recesses have been cut as shown at D, to accommodate the ends of the pressure-springs.



opening is cut in it, of the same size as the negatives. The negatives should fit easily into the opening without any unnecessary clearance. The outside dimensions of the cardboard should be such that it will fit snugly but easily into the printing-frame. The cardboard is then glued to a thin, wooden board, such as the bottom or top of a cigar-box, which has been cut to the same outside dimensions as the cardboard; but with the rectangular opening somewhat smaller than the negatives to be printed. A rabbet will thus be formed for the support of the negative, the

The Sad Experience of an Autochromist

WILFRED A. FRENCH, Ph.D.



SOCIETY is still talking of the famous Bacchanalian pageant given by the Bentleys at "Walhalla," their summer-home, in September, to celebrate a bountiful crop of autumnal fruits. The participants were arrayed in costumes which were appropriately scanty and conspicuously colorful. "If only this brilliant spectacle and some of the individual costumes could be perpetuated by some good painter!" exclaimed the art-loving Mrs. Bentley; but strangely enough no artist was present, although several had been invited, and none of the amateur watercolorists in the party dared make the attempt. Mrs. Bentley heartily welcomed the suggestion to send to the city for a cameraman to kinematograph the pageant; but after consulting with her friends, she decided against it. Here it was that Adrian Curtis, one of the guests, asked permission to be excused for about fifteen minutes. This request was reluctantly granted. After the lapse of nearly two hours, he reappeared, but arm in arm with Robert Lee Hayden, the noted Autochromist, carrying his outfit. Hearty applause greeted the announcement that Mr. Hayden was to make a number of photographs in natural colors (Autochromes) of the pageant. The light was good, the models posed well and kept perfectly still, and the Autochromist was satisfied with the result. He was taken back to the city at dusk, after having promised Mrs. Bentley to bring her the finished Autochromes early next morning. Among the subjects Autochromed, and which the two men discussed enthusiastically, was one of Bacchus (Marshall Hooper) decorated with clusters of grapes, ivy and chrysanthemums, clasping a lovely nymph (Eleanor Bentley, the host's oldest daughter) and holding aloft a large bunch of luscious Catawba grapes at which the girl was eagerly looking, with upturned face. What a masterpiece that was to be!

Hayden had been hardly prepared for the important task asked of him without any notice. He hadn't used his 5 x 7 plate-camera which was fitted with an automatic inter-lens shutter, for two years; nor had he exposed an Autochrome plate of any size during that long period. Luckily, he was able to purchase two boxes of 5 x 7 Autochrome plates of a local dealer and, hiring a taxi, he had sped to "Walhalla," in response to the urgent telephone message and had made eight correct exposures. Unfortunately, he had no solutions in which to develop the exposed plates,

nor could the necessary chemicals be obtained, for all the stores were closed. Moreover, he had an important engagement for that evening, and the only thing to be done was to engage the services of Snelling, the foremost Autochrome specialist in the city. The plates were to be ready early the next morning. On calling for them, according to agreement, Hayden was informed by Mrs. Snelling that her husband had been suddenly called away on business and had asked her to deliver photo-finished material to customers. Handing Hayden his box of Autochromes, she remarked sadly, "Sorry Mr. Hayden; but the plates are all blanks. They haven't been exposed." The artist was stunned, and accepted the package with trembling hands. He couldn't understand and was unable to speak. Regaining his composure, he procured a taxi and manfully decided to face the music and accept the consequences. On the way, he stopped at his apartment and got his camera, with the aid of which he now began to reason out the cause of his failures and, if possible, to present some plausible excuse to the expectant Mrs. Bentley. In a dazed sort of a way, he looked through and studied the uniformly blank Autochromes; examined each of the four double plateholders, and the eight pieces of black cardboard used to back the Autochrome plates during exposure. He recalled every step of his preparations, including specially the state of darkness of the room, yesterday noon, when he had filled the plateholders. He questioned the skill and even the honesty of Snelling, and doubted the freshness of the plates, although he remembered that the time-limit or guaranty would not expire for another month, and knew that the dealer kept his stock of plates in a suitable place. How was he to explain to his genial patron that he, Robert Lee Hayden, an Autochromist of high rank, an exhibitor and medalist, had failed to make good. He felt the perspiration break out all over him. But, perhaps, he could get some more plates and induce Mrs. Bentley to let him try again, provided he could prove that the failures were due to no fault of his. He tried his dealer, and elsewhere. Not an Autochrome of any size was to be had! "All sold out; more in a few days!" was all the satisfaction he could get.

Ah! he had discovered the cause of his misfortune! Fool that he was not to have examined his camera; not to have tested the shutter! He remembered now that when he had used it the last time—two years ago—the shutter had

been inclined to stick. During the excitement of making the pictures of the pageant, he hadn't thought of that. Yes; he had set the shutter at B (Bulb) for all of the eight exposures; had pressed the bulb, thought that he heard the usual click, and had given each exposure the required six seconds, and pressed the bulb again—closing the shutter. The shutter should have opened, and *remained open*, each time, for six solid seconds! Calming down a bit, Hayden reached for his camera, opened it hastily, but carefully, and tested the shutter, repeating the operations of the day before. The shutter functioned perfectly! Not the least sign of hesitation or sluggishness! If it had acted capriciously, unevenly, then some of his exposures might have been successes. But they were all failures—all alike in appearance. He was non-plussed, upset. He again peered through the eight ill-starred plates, all the way to his destination—nearly twenty-five miles distant—hoping that all might be a dream and that he should wake up to find blissful reality. But no! However, there was some consolation in the thought that if he, Robert Lee Hayden, with all his knowledge, experience and reputation, could not account for his lack of success, provided, as

he was, with a first-class equipment, how could any other expert be expected to furnish a solution? Wasn't he justified in facing his patron with a great, impenetrable mystery?

Arrived at "Walhalla," Hayden quietly and courageously walked up to the eagerly waiting Mrs. Bentley seated on the veranda among deeply interested friends, and, handing her the box of plates, remarked, "Here is all that fate has provided for us." Opening the box, with friends crowding impatiently around her, Mrs. Bentley held up one plate after another and, having looked through each one, turned with a puzzled expression to the hapless Autochromist with the exclamation, "But Mr. Hayden! There must be some mistake. There isn't the least thing on any of these plates!" The poor man stood with downcast eyes, unable to utter a word in reply. He felt as if the earth were giving way under him. He mumbled a few incoherent words. Just then a motor-car flew up the drive-way and, with a roar, stopped under the porte-cochère. A man jumped out—Snelling! He rushed up and caught the swaying Hayden. Handing him a package, he cried, "Pardon: Mr. Hayden. My wife gave you the wrong box. Here's yours—eight corking Autochromes!"

Will Photographic Research Upset the Wave-Theory of Light?

THERE is a new theory of light. This in itself is not at all disturbing to the average person. Light has in no way changed, and never will. But it is interesting to know that this mysterious and elusive thing which enables us to see and which has made photography possible, may be better understood and its action more clearly diagnosed because of photographic research. The nature of light has been the subject of one of the most famous controversies of science. Sir Isaac Newton held that light consisted of distinct particles or corpuscles shot off from the source. Traveling with extreme velocity, they bombarded any object in their path and were reflected to the eyes of the observer, where they produced sight.

This theory had the advantage of explaining reflection very easily, and with some difficulty Newton was able to explain the bending of a ray of light when it entered a transparent substance, such as glass or water. But there were difficulties which displaced this theory for the "wave theory." According to this theory,

light was held to consist of small waves of a definite high velocity traveling in a medium which the scientists termed the "aether."

This theory was adopted at the beginning of the nineteenth century and has proved very satisfactory, especially after investigation showed that these waves could be treated as an electromagnetic disturbance in the aether. Recently, however, a number of things have been observed which are difficult to explain by the wave-theory, and it may be necessary to turn again to a theory of corpuscles similar to Newton's.

The origin of light is now ascribed, not to molecules or even the finest division of matter, the invisible atom, but to particles of negative electricity called "electrons," which are supposed to revolve around the nucleus of the atom which carries a positive electrical charge, the atom as a whole being electrically neutral. We will admit this is a pretty deep theory for the layman; but the scientist insists that theory is nothing more than an explanation of facts, so we must take his word for it.

If a shock disturbs the revolving of these

electrons, if they impinge on one another and are then attracted back to their nucleus, they give off pulses of energy in the form of waves in the aether whose frequency is proportional to the energy which the electron releases. The wave-length depends upon the frequency; the more waves in a given time the shorter they must be, since the velocity of light is always the same. The wave-length also determines the color of light. X-rays differ from light-rays because their frequency is a thousand times as great as light. This gives them their remarkable penetrating power.

The new light that has been thrown on the question of the radiation of light is due to the study of photographic films. It has always been a mystery how a photographic emulsion adds up light during a long exposure, looking at it from the wave-theory. The emulsion consists of microscopic crystalline grains, most of which have definite forms when viewed under a powerful microscope. Some are large, some are small, but in clumps, and some are barely visible as specks under the highest powers of the microscope. When these grains have received sufficient exposure to light, they become developable. But the difficulty has been to determine how they added up the light until they had enough, for it is quite certain that it is not necessary for them to get the light-impression in any definite time.

For example, if a film is exposed under a telescope to the image of a star, an exposure of five minutes may not render any grains developable. Some action has occurred, however, for at the end of several five-minute exposures a few grains can be developed, and after several hours of exposure, a good image of the star can be developed. The hard thing to understand is how the sensitive grains can store up the billions of light-waves that fall on them. We know they must, because, if the exposure is only half made and then started again weeks later, the grains will not have lost their record of the first exposure. The second exposure will start practically where the first left off. It seems that the large grains are much more sensitive to light than the smaller ones; but, if a number of grains, even of the same size, are sorted out under the microscope and exposed to a uniform flow of light, some will be de-

velopable before others, which would seem to indicate that even grains of the same size differ in sensitiveness. If it were possible, however, to see these grains develop as fast as they received the necessary amount of light, you would hardly be able to imagine a continuous stream of light falling on them. You would imagine that the light was raining on the grains, hitting them here and there, and the effect would be that of raindrops falling on a dry sidewalk until finally the entire walk became wet.

Apply this theory to the effect of light on the grains of a sensitive film and you have the explanation of why large grains are most sensitive. They are more likely to be hit. This theory is made stronger because we know that light striking any portion of a grain makes the entire grain capable of development.

This assumption was made by Dr. Ludwik Silberstein, who is studying the problem in the Research Laboratory of the Eastman Kodak Company. He likens light to a rain of projectiles which he calls "light-darts" and has been able to calculate the relation between the size and the number of grains that will be developable after a certain exposure, a relation which has been most accurately confirmed by special experiments in the same Laboratory. And from the rate at which grains of different sizes become developable, the average diameter—which appears to be very minute—of the projectiles or darts of light can be calculated. And this calculation has been done.

On any chemical theory, it is very difficult to imagine that one grain is more sensitive than another, and a number of calculations tend to prove the new theory of a rain of light-particles to be more likely correct than that of an unbroken stream of light. Of course, many questions regarding the new theory remain unanswered. Because it is new, it will have many difficulties to meet. It offers much food for scientific thought and will lead to many experiments. If it is eventually accepted, it may prove of much value, as all scientific work eventually does, for all of the advances in the material advantages of our modern civilization may be traced either directly or indirectly to some laboratory of research in which a pioneer has discovered a new basic principle.—*Studio-Light*.



Drawing and Painting Self-Taught

ANSON K. CROSS



ANY who use the camera will be glad to know of a new method that permits rapid gain of power to draw and paint from nature. Special ability is not needed, for as any one may learn to play the piano, so, by similar effort, ability to sketch from nature may be gained if one will make the effort.

The accepted belief that there must be special ability for one to draw at all, is due to the failure of art-instruction to offer sure tests and artistic methods for training the vision. This forces the talented to study a score or more of years in order to gain the true vision that might be acquired in a few months if students, who now depend upon their teacher's eyes, were forced to rely upon their own use of absolutely sure tests in judging their work.

The student of music begins with finger-exercises and makes no early attempt to produce music, but the art-student begins by making pictures through reliance on his teacher's eyes if not his hands, and often spends hours, days, weeks, and even months on one picture.

Though true drawing is not art, it is the necessary alphabet of art, and so the art-student spends most of his school-days in simply the effort to draw and paint truthfully from nature.

The mistaken idea that any skill in drawing is proof of genius is fostered by artists, teachers, and text-books, and so drawing is considered an accomplishment, instead of the most necessary and helpful of all studies, on account of its development of the perceptive, reasoning, and moral faculties.

Desire to paint is proof of ability to paint, and all who have the desire will welcome the method that makes its fulfilment possible with slight expenditure of time and money.

The first full year's test of this method in the School of the Museum of Fine Arts, Boston, in connection with a longer test in the public schools of Stoneham, Massachusetts, seems conclusive evidence that any pupil who can complete a grammar-school course, can learn to draw from nature, and any high-school graduate, not color-blind, can learn to paint from nature.

Instead of pictures at the start, this method aims to train the vision by means of sketches made by eye alone, in from one to five minutes without the aid of pencil measures or tests. It proves, too, that power to execute develops with the power to see, by neglecting technique and allowing the student to select his medium,

and work out his own way of using it to make his sketch.

The method has proved that theory does more harm than good to the student who has not gained much power to see; therefore vision-training sketches take the place of theories. During the first year the teacher refuses to draw for students, or before them, or to tell them what changes to make in their work.

Instruction is confined to advice as to the subject and the time to be spent upon it, and the proper use of the tests to be applied by the students. Completed sketches are given class criticism once in a while, but students are seldom allowed to work upon them later, as rapid progress demands self-reliant effort. The student who is willing to work can find his own mistakes more surely and quickly than any teacher could reveal them to him.

The drawing-method is based on the old perspective-method of making a drawing by tracing the object upon a pane of glass, only the student is not allowed to trace, and draws entirely by eye upon a sheet of clear glass that has a white slide behind it. No measures are allowed and the drawing must be changed by eye alone until it seems to be perfect. The drawing is made with a special crayon and tested by drawing out the slide and holding up the glass at right angles to a line from the eye to the object, and then seeing if the lines of the drawing will appear to cover those of the object as they would cover if they had been traced. If they will not do this when the spirit-level set in the frame shows that it is held level, the students see their mistakes. Corrections are made not by tracing or erasing a part, but by erasing the entire sketch and repeating the effort until a correct sketch is produced on the Glass.

When able to draw correctly on the Glass, the student makes sketches on paper without measurements, tests, or erasing until the work seems perfect. Then he tests by use of the spirit-level and in other ways explained in the text-book, but never by tracing.

A few months' use of the Glass will give the beginner such perfect vision that he can draw better without the Glass than with it and thus naturally discards it. The Glass may be used in-doors and out-doors, from still-life and common objects, and from human and animal forms. Its use is more of a game than the hard work which drawing often becomes.

In the study of painting, use is made of two

lenses fixed in one side of the frame. These blur away details and present simply the essential masses. The student studies his subject through one lens before he begins to paint, and after he has represented the masses shown by the lens, he places the painting a few feet away from the subject, and holds the lenses so that with one eye closed he sees the object in one lens and the painting in the other lens. Then he stops looking through the lenses and looks between them so as to see equally the two blurred pictures of the object and its painting without shifting the glance of the used eye. This vision enables him to forget the facts behind the lenses and see the effect upon the picture-plane of the lenses. This makes the comparison that of two pictures on the same plane, and painting from nature is thus as easy as copying a painting.

Just as only one can copy, so most of the students in a class can see the difference between their painting and the effect of the object as shown on the adjacent lenses, and the first lesson in painting is often a surprising success.

The method makes color easier than drawing, and students who study both together, as is advisable, soon find that they fail in painting, not because they cannot get the colors right, but because they cannot place them properly. When this is realized, the students turn back to drawing on the Glass and often wish to drop painting entirely.

Thus the drudgery of art-study disappears, for students teach themselves using the medium, method, and subject, that interest them. Art-critics who have seen results say that more power of vision is acquired in the first year, in only eight hours a week, than is gained in many years by usual methods.

The text-book does not pretend to teach art, but simply that true vision which has always influenced the work of the greatest masters in painting. When true vision is gained, students should attend an art-school to study art. At present, art-school students spend most of their many school years in trying to master drawing and painting. This is necessary because the public schools teach art instead of drawing, and until their graduates go to an art-school they often have no conception of how to use their eyes to see truthfully.

This method has received such general support from artists, art-schools and educators that in time the public will probably demand that real drawing be taught in the Grammar Schools in such a way that it will enable the grade-teacher to get as good results in drawing as in any other subject.

The method has enabled low-grade grammar-school pupils to draw better than many art-school students, and so in time there will result a public able to judge art on its merits and thus eager to buy good pictures for their beauty, and not because the artist is famous and dead.

This method will also benefit the teachers by multiplying the number of students, and decreasing the number of poor artists, for when all can draw and paint, there will be no temptation for those of average ability to follow art as they do at present.

No method can make it easy to become an artist, for art is more than truthful representation and demands a life of consecrated effort on the part of the most talented. This method does, however, shorten the time needed to gain true eyes to such an extent that those who persevere for a year will often find their eyes truer than the tests. Rightly used, the tests soon become unnecessary and the work so free that it proves this method to be the most artistic of all.

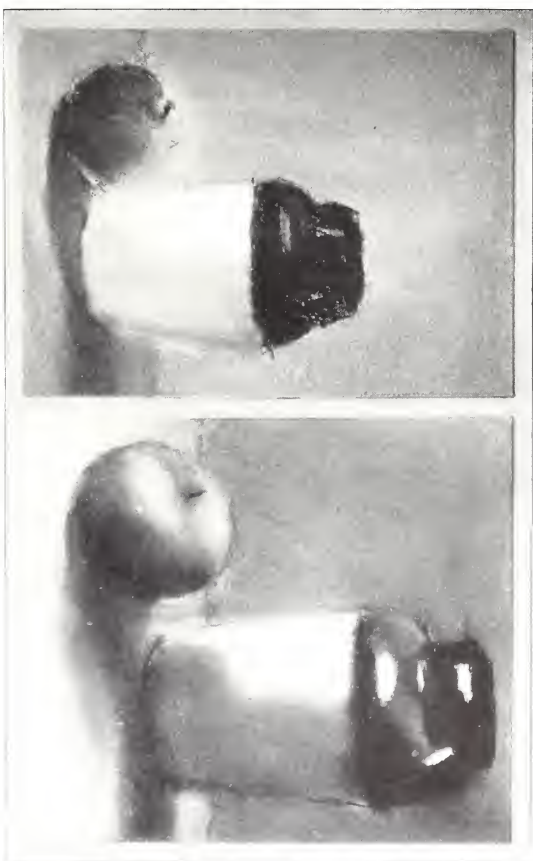
The beginner who works at home may gain as rapidly as the student who attends a class, and often more gain is made in a year of home-study than is generally made in a year of art-school study by usual methods.

The School of the Museum of Fine Arts, Boston, has formed a new class to enable students to prepare at home by this method, so that they may enter the school able to advance rapidly. The value of the Glass in this connection cannot be too strongly brought to the attention of prospective students who are eager to make thorough and rapid progress in their art-studies.

This class for a fee of ten dollars will supply the text-book and the Glass, and give criticisms upon home-work sent by mail. An hour a day thus spent will give any one power to draw and paint from nature. There is no obligation to attend the school later, and no need to send in drawings oftener than once in a month, or two, or three. Thus the expense for progress that will save a year or two of art-school study is so slight, that all who wish for it may now obtain the very best instruction that can be given in drawing and painting.

This new class is for the art-students of the nation, when its value is widely known it will probably lead to donations from art-lovers all over the country sufficiently to enable the school to aid talented students who have proved their ability by home-study to attend the school in Boston. Thus the standards of the school will be raised and also those of the artists.

Apply for information to the "Home Study Class," School of the Museum of Fine Arts, Boston, Massachusetts.



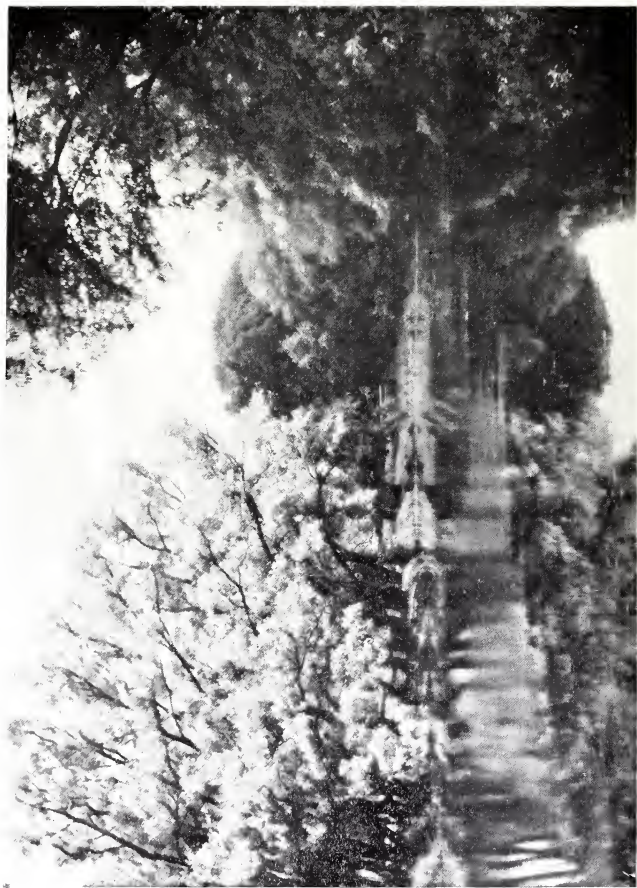
FIRST LESSON IN PAINTING BY FOURTEEN YEAR OLD PUPIL.

LEFT HAND PICTURE BEFORE USING GLASS

RIGHT HAND PICTURE MADE WITH GLASS

WHEN THE WILLOW TREES FORETELL RAIN

HERBERT B. TURNER





EDITORIAL



The October Landscape in Monochrome

THANKS to the invention of color-photography—fifteen years ago—the photographer has been enabled to secure by direct and simple means truthful copies of the autumnal landscape. But while the devotee of photography in natural colors is engaged in his hobby, the worker in monochrome is content to get his results without color. In viewing the October landscape in its dress of brilliant, variegated colors, of which red, orange, yellow and green are predominant, the inexperienced worker may wonder what will be its appearance in the ultimate photographic print. If he uses an ordinary dryplate, he will find that the relative color-values will not be rendered correctly; for what colors appeared as light tones in the original landscape will have photographed dark, and vice versa. He may remember to have heard that blue will photograph white, or nearly so, and that a yellow, which is higher in the scale of brightness, will be darker, in the finished print.

As a simple and convincing experiment, let the worker look at an ordinary blue-print of an architect's design first through a light-blue filter and then through a red one. In the former, the blue background will appear as a grayish white with the white design and lettering only faintly indicated; whereas in the other the background will appear as a solid black, the design standing out clear white. And thus they will appear when photographed, respectively, with an ordinary dryplate, and with a Panchromatic plate aided by a red filter. A dark-blue sky relieved by white clouds, substituted for the blue-print, will yield a similar result, only the rational photographer will use an orthochromatic plate and a two-time yellow filter, which will give him a consistent and truthful result. If the worker will further view a group of orange and yellow dahlias through an orange filter, and find them both look alike in color, he will discard that filter and choose a two-time yellow one. Seen through a K 2 (yellow) filter, purple flowers will appear brown in color, but normal when viewed through a K 1 filter, and the latter is the filter to use. The critical pictorial worker should be careful to avoid the danger of overcorrection through compensating filters for reasons given below.

Another temptation is to crowd too much into the limited picture-space and make the landscape appear spotty. Judgment in choosing the light will tend to obviate this.

If in exposing an ordinary dryplate, the camerist may wish to know how the scene will appear in the final result, he should view it through a light-blue glass or a color-screen (ray-filter) of the same color. He will observe no relative change in the value of the colors. If the landscape looks right when viewed through a light-green filter, he should use an orthochromatic plate and a light-yellow (two-time) ray-filter. Ray-filters sold by reliable photo-supply dealers are better than home-made devices. Ray-filters, also test-charts composed of filters corresponding to ray-filters to be used by being affixed to the camera-lens, are prepared for the trade by the leading manufacturers of color-sensitive (orthochromatic) plates and may be procured at any first-class photo-supply store. In using a ray-filter for landscape-work, some workers are inclined to select one of too dark a shade, which is detrimental to the artistic success of the photographic print. Such practice tends to exaggerate the tone-values of the colors in the landscape and make them appear abnormally dark. The blue sky will appear too deep in tone and the clouds stand out too prominently and unnaturally; the beautiful atmospheric quality will disappear; so will the gradations; distant objects or masses, particularly the far-off horizon, will merge in nearer planes, and the atmospheric perspective be utterly destroyed. As a consequence, the entire picture will assume an unduly flat and harsh appearance—devoid of depth, truth, feeling and charm. The aim of the truly artistic photographer is to interpret the landscape as it presents itself to the normal eye, in all its natural beauty. If he finds that certain masses of color will be recorded in the finished print so as to impair his composition, he may be obliged to change his viewpoint or select a time of day when the light is more favorable. Sunlight is the life and glory of the October landscape. Here, a medium-yellow filter will enable the worker to see the gorgeous autumnal landscape as it will appear in a monochrome print—with all the color-masses in their relative brightness, and the composition—as the result of his artistic intentions—in its full beauty of form, balance and perspective.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition
Wolfeboro, New Hampshire, U.S.A.

Prizes

First Prize: Value \$10.00.
Second Prize: Value \$5.00.
Third Prize: Value \$3.00.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface and sepias are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins; but in every case, prints should be protected by strong, stiff boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Landscape with Figures

Closed July 31, 1922

First Prize: Emily H. Hayden.
Second Prize: J. Thornton Johnston.
Third Prize: F. E. Bronson.

Honorable Mention: Alec Blackie, Paul T. E. Carden, W. E. Donahue, Allan Fraser, Miss G. Finnie, W. H. Finch, Louis Garday, Chas. T. Graves, W. Percy Hardy, Bertran F. Hawley, W. X. Kincheloe, Dr. K. Koike, W. S. Lee, F. W. G. Moebus, Alexander Murray, Herbert Roderick, H. B. Rudolph, J. Herbert Saunders, Eleanor L. Smith, James G. Tannahill, Joseph Wada, Ernest J. Webb, Cornelius Westervelt, Frederick Willson.

Subjects for Competition—1922

"Parks." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.

Subjects for Competition—1923

"Home-Portraits." Closes January 31.
"Miscellaneous." Closes February 28.
"Child-Studies." Closes March 31.
"Still-Life." Closes April 30.
"Bridges." Closes May 31.
"Marines." Closes June 30.
"Landscapes with Figures." Closes July 31.
"Summer-Sports." Closes August 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Should Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, are inclined to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know?



THE RIVER

EMILY H. HAYDEN

FIRST PRIZE—LANDSCAPE WITH FIGURES

Distant Landscapes

AUTHORS of exposure-guides classify landscape-subjects under three headings. These are designated distant landscapes, ordinary landscapes and nearby landscapes. These classifications are not purely arbitrary, continues a contributor in *Kodakery*, but are based on the fact that the distance between the camera and the particular landscape-features that are to be the chief objects of interest in the picture, affects exposure. A distant landscape may be defined as one on which the chief objects of interest—hills and valleys, streams and bodies of water, etc., are from, let us say, half a mile to several miles from the observer.

An ordinary landscape is one on which the chief objects of interest—trees, fences, buildings, roadways, cattle, etc., are within a few hundred feet of the observer, and a nearby landscape is one on which the chief objects of interest are less than fifty feet away. In photographing an ordinary landscape or a nearby landscape, we expose for the foreground detail, but in photographing a far distant landscape, we expose for the objects of interest in the distance. The problem in distant landscape-work is to obtain ample contrast between the tones. The farther away the subject is, the less will be the visible contrast between the earth and sky and landscape objects, and the less will be the contrast between the tones in the picture.

Since nearby objects always look larger than objects that are far away, their shadows, which appear as dark tones in contrast with lighter ones, will be more promi-

nent, and add more contrast to a picture, than the shadows of far distant objects. The atmosphere also affects the obtaining of contrast between the tones in distant landscape-work. The air usually contains particles of dust and more or less water-vapor. In speaking of water-vapor, we do not mean fog or mist, which is composed of comparatively large water-particles, but we mean the faint haze that is often seen in the distance and which is largely due to extremely minute water-particles.

On a clear summer-day the dust-and-water-vapor suspended in the air that is between the camera and objects a few hundred feet away is usually unnoticed, but that suspended between the camera and objects a mile or more away is often sufficient to be visible as a bluish haze in the distance. In order to understand why this haze is bluish we must remember that light consists of waves and that the different colors of light correspond to waves of different lengths, the longer waves being red and orange, those of medium length being green, and the shortest waves are those of blue and violet light. Light-waves which are shorter than violet are not visible to the eye, but they do affect the photographic film, and the light of these waves is called ultra violet.

The light-waves which are scattered by the particles of water-vapor are chiefly the shorter waves, that is, the blue-violet and especially the ultra violet. If we remove the shorter light-waves, therefore, we shall get rid of most of the scattered light and can make the picture by the other rays which penetrate the haze and



THE SHORT CUT

J. THORNTON JOHNSTON

SECOND PRIZE—LANDSCAPE WITH FIGURES

are not scattered by it. The shorter light-waves are absorbed by a Kodak Color-Filter, which cuts out the ultra violet and violet rays so that the scattering effect is largely eliminated, and, as a consequence, contrast between the tones of the subject is increased. Still more contrasts can be obtained with a Wratten K2 Filter, as this filter is of a deeper yellow color and cuts out more of the violet and blue. For special work, such as photographing far-distant snow-capped mountains against a clear sky, or other very distant scenes in which strong contrast is wanted, a Wratten G Filter, which is a deep yellow-contrast filter, should be used to increase the contrast.

In photographing distant landscapes we must be careful not to overexpose the film, because overexposure reduces the contrast between the tones. On a distant landscape no tones can be seen that are as dark as the shadows of nearby objects, the shadows on a distant landscape appearing faint and of about the value of the halftones (the tones between the light and dark ones) seen in a subject a few hundred feet away. In many regions where the distance appears hazy in warm weather, the air becomes so clear when the temperature drops after a storm that distant landscapes can be clearly recorded without a filter.

When no filter is used $1/50$ of a second, with stop F/16, is ample when the sun is shining. When using filters the writer has obtained very satisfactory results by using stop F/16 and giving a $1/10$ second exposure with the Kodak Color-Filter, a $1/5$ second with the Wratten K2, and a 1 second exposure with the Wratten G Filter. As distant landscapes always require comparatively short exposures it is very important to fully develop the negatives.

A Question of Quantity

ONE of the questions we are frequently asked is concerned with the quantity of solution required for some particular photographic process—let us say, for example, the development of gaslight postcards. Such a question is not capable of being answered by some definite figure, says *The Amateur Photographer*, because the actual quantity that is necessary is governed, not by the area of the card, but by the extent of the work which the solution is called upon to do. A small vignetted head, with most of the card practically a blank white, might not exhaust one-tenth of the developer which was demanded by a picture of the same area, but with most of its surface covered with a dark image, just relieved here and there by a patch of light. It is interesting, but without any real bearing on practice, to note that in such a couple of hypothetical cases the demands upon the hypo-bath would be reversed; there would be more unaltered silver-salt to be dissolved out in the case of the light picture than in that of the dark one. The practice of photographers, therefore, is not to work with some just sufficient quantity of developer or of fixer, but to use such a proportion that there can be no doubt of having an ample margin. This is in the case of the fixing-bath, the action of which on a print cannot be seen. As far as the developer is concerned, we can see how it is working, and so long as the activity of the solution is not impaired, and the prints given are of a good color, we can go on using the same lot of liquid for print after print. But if the prints are to be as good as they can be, a fresh lot should be taken the moment there is the slightest sign of the color no longer being a pure black. Paper, plates, and

films are so much more costly than the solutions applied to them that it is very false economy to risk getting a failure, for the sake of saving a few ounces of a bath costing some small fraction of a cent.

A Use for Roll-Film Spools

THE accumulations of empty spools, which occur in photo-finishing rooms, often give rise to the question, "Cannot anything useful be done with them?" or the remark, "What a pity to waste all those." Although not pretending to have found a use for the masses of spools which collect every season, I have found an

This is naturally a matter of guesswork rather than precision; but a couple of No. 1 Brownie spools will hold at least ten or twelve pounds, and two 3-A's will hold very much more. Having removed the nail, the spool is hammered in by blows on the metal end. There is no risk of splitting the wood, and when the cap is flush with the wall, it hides any unsightliness due to loosened mortar. The hole for screw or nail is already in position, and again splitting is avoided, and a long screw can be used with advantage. Small bracket-shelves can be fitted to the workshop-wall in a minimum of time in this way. It is also possible to construct a set of shelves by obtaining further pieces of shelving to the first by sets of four equal sized spools without



SCHOOL-DAYS

F. E. BRONSON

THIRD PRIZE—LANDSCAPE WITH FIGURES

occasional use for odd ones, for a purpose for which they are eminently suited.

They make very efficient wall-plugs. Most photographers, at some time or other, have need to put up a new fixture, or repair an old one, and these jobs are never so awkward as when support is taken from a brick-wall. The time-honored method of smashing a hole in the wall with a cold chisel, and plugging it with a lump of wood, is neither pleasant to do, nor nice to look upon. With the aid of an old spool the matter is greatly simplified. All that is necessary is to make a deep hole between two bricks, with a six-inch nail and a hammer, and to remove the metal cap from the split end of the spool. This end then needs shaving down a trifle. The nail must be driven into the wall as cleanly as possible, and removed without enlarging the surface-end of the hole any more than can be helped. If a selection of different sized spools is at hand a length can be chosen according to the depth of the hole, which, in its turn, should depend on the weight of the fixture.

caps removed, screwed-leg fashion at the corners of the shelves. If the series is carried any height, however, it will be advisable to fix both top and bottom shelves to the wall.—*THEMUT—The British Journal*.



Ancient Foreign Travel

"Do you remember that fortnight we spent together on the Alps?"

"Rather! Ripping, wasn't it?"

"Yes. And do you remember that lovely gorge up the mountains?"

"I should shay sho. I haven't had a meal like it since."

"I wonder how people cook their grub on these icy mountains?"

"I expect they use the mountain-ranges?"—*Globe*.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



FIGHTING TOM

JOHN SMITH

EXAMPLE OF INTERPRETATION

Advanced Competition—Domestic Pets Closes November 30, 1922

It is rare to find a person who does not respond to the appeal of a pet. To be sure, some prefer a dog to a cat or a canary to a turtle. However, there are comparatively few who do not like some sort of pet in the home. The camerist may admire handsome buildings, revel in the ever-changing moods of the sea and devote his time to the marvels of photo-micrography; but when it comes to his pets—there is heart-interest! One outstanding feature about the photography of pets is that it is based on attachment and not solely on pictorial interest. The photographic portrayal of that which is dear to the photographer usually calls forth his best artistic and technical skill. It matters little whether the pet is a canary, turtle, goldfish, rabbit, parrot, cat, dog, calf, colt or chicken—there is no question that it fills its own niche in the hearts of the household. There are persons that be-little the affection and care bestowed upon pets; but give me the man who can win a dog's devotion in preference to one who cannot.

It is a comparatively simple matter to photograph a pet, if no attention be paid to the composition or appeal of the picture. At the outset, it will be well

for contestants to remember that this competition does not call for *record-photographs* of domestic pets. There must be appeal, and it must not be artificial. Do not attempt to dress up pets in all manner of grotesque costumes, or induce them to simulate some human act like smoking a pipe, being ill in bed, etc. Such pictures do not express the purpose of this competition. Let us have our pets as we know them, free of all artificiality. However, with regard to commercial pictures made to appeal to the general public, pets may be dressed up and induced to perform strange antics.

It does not follow that the Domestic-Pets competition must be confined to those usually kept in the house; it may include pets kept in the farm or estate. However, such animals must be *pets*, not merely domesticated animals. An intelligent horse may become just as great a pet as a cat or a dog. Even raccoons, foxes and pheasants have been known to become great pets. In short—any animal, bird or reptile or fish that has been made a pet, is eligible to have its picture sent to this competition. However, remember that such pictures must make an appeal to the beholder, and not represent merely a commercial record. Particular emphasis should be placed on some little trick or habit that is out of the ordinary.

If unusual combinations of animals are obtainable, a pet—such as a raccoon, cub-bear, fox or deer—offers excellent opportunities to the intelligent camerist. The very fact that these animals are more often wild than tame, is an entreaty that few can resist. Although the animals hold the interest of themselves, it is just as important as ever to use care with regard to pictorial composition. Try to avoid a background of clapboards, shingles, bricks, picket fences and other vertical and horizontal lines. A clump of bushes, a flower-bed, a wheat-field may be utilised to advantage.

There is one important point to be taken into consideration. Some persons are better fitted than others to manage animals successfully. Unless the camerist can make friends with the pet to be photographed, his chances of success are reduced to a minimum. No animal will act or appear natural if it is frightened or distrustful. Sometimes, personality alone is responsible for the restiveness of pets; and, whenever this is found to be the case, the camerist had better seek other subjects. I do not mean to imply that the camerist's personality is repellent, but rather that his physical or mental characteristics are such as to arouse fear or suspicion. Some of the most refined and likable people have an aversion to cats and dogs; and usually the cats and dogs reciprocate heartily. Fortunately, in most cases there is harmony, and the camerist can devote his entire attention to his willing, although somewhat unruly, subject.

Without a doubt, the reflecting-camera is best suited to the photography of domestic pets. The invaluable advantage of being able to watch the subject up to the moment of exposure enables the photographer to obtain the best and most natural results. Of course, other types of cameras may be used successfully. I do not mean to imply that they cannot be used; however, the fact remains that the reflecting-camera is the best adapted to the subjects under discussion. Next in utility are those cameras that are equipped with a groundglass focusing-back. These permit the camerist to focus accurately and to compose the background; but with regard to catching the psychological moment—that is out of the question; for by the time the plateholder is inserted, the subject's position is apt to change. In using a camera of this type, the most satisfactory method is to focus and compose the background, then insert the filled plateholder, remove the slide, and then with the wire-release or bulb in hand await the desired position of the subject. Roll-film cameras and other types that have no ground-glass focusing-back must be focused on a given point as accurately as possible by scale, and the subject must be placed at this point in order to register sharply at the moment of exposure. A direct-view finder is of great assistance although, obviously, it cannot have control over the focus. To sum up the question of cameras suited to domestic-pet photography, there is no question that the reflecting-camera is supreme. However, other cameras may be used successfully, provided that the focus, exposure and composition are carefully co-ordinated. Perhaps, the greatest asset of all is technical and artistic ingenuity. By that, I mean the ability to meet the unexpected problems that arise inevitably in this branch of photography. There are all kinds of little expedients that may be used to gain a point, and the intelligent camerist should be alive to each and every one of them. Only by quick thinking and alertness can success be achieved.

Often, it is possible to obtain interesting and sometimes pathetic subjects by studying contrasts. For example, the life of a high-bred dog owned by a wealthy woman on Fifth Avenue, New York City, and that of

a good-natured mongrel who loves and is loved by the children of the slums. In the former case, we might portray little "Fifi" or big "Rollo" sitting beside the chauffeur or mistress in a luxurious limousine; and in the latter case, "Jerry" or "Tim" seeking his dinner in some back-alley or, perchance, a child may be sharing a piece of cake with the homeless dog. Obviously, it is not necessary to visit New York City to obtain such material. It may be found in virtually every city or town the world over. It might not be amiss to point out that hunting-dogs in action offer some splendid subjects. Shepherd dogs and collies are also excellent studies. I remember how last winter a neighbor of mine made a light harness for his collie so that the dog could pull his two small boys on a sled. The boys and the collie thoroughly enjoyed racing up and down the street at breakneck speed. The companionship of the three was ideal and their good times together were enjoyed by all who saw them. To make a picture of this collie, as he stood in his little harness, with his face alight with mischief and good nature would be a task; but what a picture he would make without the harness, alert to his little masters' every move!

In the picture on the opposite page, Mr. Smith has indicated another rich source of picture-material. Often, highly interesting studies of our pets may be made in circumstances that are out of the ordinary. In "Fighting Tom", we have the very opposite of the usual portrayal of a cat. As we look at this picture, we become aware of a certain suspense which usually precedes the clash of battle. Something is about to happen and to happen quickly. Mr. Smith pressed the shutter-release none too soon. The next instant there was action of a character that would require the maximum speed of a focal-plane shutter.

The ideal method to photograph pets is the one with which the camerist waits for the subject to assume a *natural pose in natural surroundings*. Many camerists attempt to use force. By that I mean that they pick up a kitten or puppy, take it out of doors in the sun, try to make it look cunning, and end the farce by obtaining a picture that has no merit other than that possessed by a record-picture. Let me assure the reader that no successful domestic-pet picture can be made, unless the subject is natural, unafraid and in its natural environment. After all, these requirements ensure the truthfulness of the picture and are the factors in its technical and artistic make-up that cause it to appeal to the beholder. In short, it rings true; and that is what every picture that we make should do.

All in all, there may be no competition that interests a wider circle of our readers than the present one. Inasmuch as the Editors of PHOTO-ERA MAGAZINE are lovers of pets and have had many of them, it may be said that interest in this competition is keen among all those concerned. We appreciate the difficulties that must be surmounted and the infinite patience that is often required to obtain a result that is apparently very simple. There is a common bond between all lovers of animals and bird-life; and this, added to our mutual interest in photography, should make this competition more popular than ever for those that send prints, for those that judge them and, finally, for those that see the prize-winning pictures in PHOTO-ERA MAGAZINE. Let this be a mutual, enjoyable and profitable competition. Moreover, let it be remembered that this, and every competition, is not for the few, but for the benefit and pleasure of many.

A. H. B.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition
Wolfeboro, New Hampshire, U.S.A.



Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. Or, in case of dual authorship, names of both should be given. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{3}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface paper and sepias are not suitable for reproduction, and should be accompanied by smooth prints that have the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins, but in every case, prints should be protected by strong, **stiff** boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

Awards—Beginners' Competition

Closed July 31, 1922

First Prize: Cornelia Clarke.

Second Prize: A. H. Scott.

Honorable Mention: A. Clouser, M. A. Fernandez, Philip Mehler.

Insist on a Photographic Evening

IN these days of hurry and bustle, theaters, motion-pictures, dances, clubs and other evening-attractions, the phrase, "long winter-evenings", no longer has the same significance that it had fifty years ago. In those days, anything that would help to pass the time between sunset and bedtime was most welcome. However, even to-day, there are long winter-evenings which may be rendered less uninteresting provided that photography is allowed to play the part of entertainer. The beginner and even some amateur photographers do not appear to appreciate the possibilities that lie in photographic work in the evening.

To-day, with the modern, compact equipments that may be obtained, there is no reason to say, "I can't do my own photo-finishing because I haven't any dark-room, and to do my own work means getting so much apparatus that I simply can't bother with it in my small apartment." With care and a little planning, virtually all ordinary developing, printing and enlarging can be done comfortably in a space no larger than the top of a kitchen-table. Moreover, much of the work may be done with the room well lighted; and the old, red darkroom-lamp is almost a thing of the past. To be sure, certain processes require the use of a ruby light or one of the newer safelights; but by the use of a desensitizer even dryplates may be developed without a red light. For developing, there are many excellent developing-tanks for plates, film-packs and roll-films; for printing there are compact and very serviceable electric printers and for enlarging there are a number of high-class enlarging-outfits to fit every purse. In short, the darkroom is virtually eliminated for the average amateur photographer.

Now, to return to those long winter-evenings. Let us take for example the experiences of a number of camerists and roll them all into one composite case, typical of the average amateur photographer. The vacation-days are over. Our "composite" camerist arrives at home with a miscellaneous collection of prints, negatives and undeveloped plates and films. Owing to his absence, the work at the office is behind and it requires a week or ten days to get things straightened out. That done, he receives notices from his lodge, club or fraternity that the meetings for the winter-season are about to begin. There are two plays in town which he feels that he should see; and then, too, there is that wonderful Russian pianist at the Symphony. Last, but not least, two or three of the "greatest motion-pictures in a decade" are in town for a limited run. At home, his wife has several bridge-whist parties all planned and his daughter simply must entertain her sorority. His son is on the high-school basketball team and insists that he go to every game. There may be other events scheduled; but I have

mentioned enough to show that the opportunity to make a few prints or enlargements is extremely limited unless our "composite" friend insists that he is as much entitled to have a photographic evening at home as the rest to have their parties. Not only should a definite evening be appointed, but nothing should be allowed to interfere with it. Otherwise, photography will be squeezed out altogether. Of course, there are homes where outside attractions do not come so thick and fast that there is not an evening or two during the week when much pleasure and benefit may be obtained from developing, printing or enlarging.

It should be self-evident that a thorough reading of the photographic magazines ought to be part of the program. Moreover, there are a number of excellent photographic textbooks that should receive his attention. The combination of thorough reading and practical work will enable our "composite" friend to get the greatest pleasure and profit from photography. Even as in other pursuits, the more he puts into it the more he is sure to get out of it.

My plea in this little article is for every reader to make the most of the available winter-evenings. There is a tendency to let other matters interfere with photo-



AFTER THE STORM

CORNELIA CLARKE

FIRST PRIZE — BEGINNERS' COMPETITION

Let us assume that our "composite" friend has won "his rights" and that one evening a week he has free access to the kitchen, bathroom or his own workroom where he may print or enlarge until the wee small hours, if he so desires. Aside from the so-called regular work, there is much that he can do to add variety to the long winter-evenings. The careful cataloging of his negatives is a tedious but very important task. Mounting his prints and titling them in an album is another. Then, also, there are enlargements that may be colored for Christmas; lantern-slides to be made for an illustrated talk at the club; bookplates may be made as described by Dr. Horning in this issue; and window-transparencies of some of the choice negatives would be an additional, pleasant experiment. If our friend had access to a good microscope he would find a fascinating evening's work in photomicrography, provided he were properly equipped to attempt it. Possibly, our friend might own a stereo-camera; if so, his photographic evening would be unusually interesting. Perhaps, he might even coax members of the family to act as models and he might attempt at-home portraiture with considerable pleasure and success. In this connection, I might add that practice with flash-powder and various modern artificial lighting-equipments would prove of interest and practical value. In short, our friend might find that more than one evening a week would be required to enable him to accomplish all the work in which he could not help becoming in-

terested. It should be self-evident that a thorough reading of the photographic magazines ought to be part of the program. Moreover, there are a number of excellent photographic textbooks that should receive his attention. The combination of thorough reading and practical work will enable our "composite" friend to get the greatest pleasure and profit from photography. Even as in other pursuits, the more he puts into it the more he is sure to get out of it.

One of our old subscriber-friends called a few days ago and in the course of the conversation it developed that he had given up active work in photography several years ago. Business-duties interfered and gradually he lost his former keen interest. However, he still read PHOTO-ERA MAGAZINE and thus kept in touch with his former hobby. Suddenly, an event occurred that re-awakened his love of all things photographic, and today he appears to be more enthusiastic than ever. He told me that he deeply regretted his period of photographic apathy, because his equipment became obsolete or useless and when he wished to become actively interested again, it cost him considerable time and money to re-equip himself to do good work. In short, had he maintained active interest he would have been much better off in every way. He looked over this little article and when he had finished he said, "Amen!" If my suggestions and the experience of the reader just mentioned will serve to keep up photographic enthusiasm during the so-called "dull winter-months", this article will have accomplished its purpose. Begin now to make sure of at least one photographic evening at home every week during the coming winter. It will be eminently worthwhile.

A. H. B.



PLEASED

A. H. SCOTT

My Outdoor Darkroom

EDITOR OF PHOTO-ERA MAGAZINE:—I have gotten a great deal of fun out of building myself an outdoor darkroom this summer. Perhaps, your readers may like to hear about it. It is at the end of the garden, back of my house, in Newton, where I live. It measures eight by ten feet, and is seven and one-half feet high; has running water, sink, opening in ceiling topped by a tiny cupola; has shelves, two long tables, a lounge and several chairs, being, I think the only darkroom so furnished. There's also wall-space for a number of framed prints (Macnaughtan, Edwards, Osborne, Mortimer and Hinton). My personal offences are kept in a table-drawer—out of sight, yet available. There's the entrance—a door protected by a partition and opening at one end, in case I am developing or exposing. Each of the other three sides has a large glazed window covered with ruby-fabric (safe, tested with a spectroscope) and hinged at the top so as to swing out and up, in hot weather—of course, when safe to do so—but across the window-frame is stretched a fine wire-netting. No flies or mosquitoes!

Thus I have a darkroom, summer-house and den—all in one. Comfortable? You bet, it is! Then, too, I've installed one of those Ica enlarging and projecting equipments, and when I'm making enlarged prints, I just lie on the lounge and count the seconds during the exposure. How? You can't guess, nor any one else.

Well, while building the shelves one night—the last week in July—I was being entertained by a dear little tree-frog in a tree close by, and was glad to have such pleasant company. The first week in August I made

my first enlargement, but when I came to timing the exposure, I found that I had left my watch in the house. I was mad, though I really didn't need it. At that moment my little friend in the tree began to trill—regularly, steadily. I began to count the intervals. They seemed exactly *one-half second* apart. After taking the exposed sheet off the easel, developing it and placing it in the sink to wash, I rushed off into the house and got my watch. I sat down, watch in hand, and counted the notes of my little assistant in the tree. He had kept right on, as before, never wavering, just like a clock, the intervals between each note registering *two per second*, and *one hundred and twenty to the minute!* Can you beat it? He kept it up, without the least change, until long after midnight. Once he rested for about ten minutes, then promptly resumed his part as a member of Nature's universal orchestra.

And thus it has been going on, night after night, with few exceptions. Bye and bye, of course, my little friend and time-keeper will have to stop—for the season.

C. L. D.

August 10, 1922.



Good English Preferred

"I PUT in French phrases here and there," said the would-be writer, "to give the article an atmosphere of culture."

"That's all right," said the editor, "but it would have helped still more if you'd put in a little good English here and there."



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Desensitising in the Development of Autochrome Plates

THE advantages of the desensitising process in the development of Autochrome plates are the subject of strong recommendation by M. J. Cæron in a recent issue of *La Photo-Pratique*. M. Cæron confines himself to the use of phenosafranine as a preliminary bath, which, he finds, is the only way in which the desensitiser can be employed with Autochrome plates. A suitable strength of bath is 1 part phenosafranine in 2,000 parts of water.

For developing a quarter-plate Autochrome about three ounces of this desensitising solution is placed in a quarter-plate dish, and the Autochrome plate immersed in it in the dark. After the expiration of one minute, development may be done by bright yellow light or by the light of a candle placed about five or six feet from the development dish, with or without the interposition of a pale yellow screen in front of it. Developing under these conditions, the appearance of the image may be readily followed either by reflected or transmitted light.

The developers usually employed for Autochrome plates serve equally well when a desensitiser is employed. The following metol-hydroquinone is a very good one:—

Metol.....	3 grms.	25 grs.
Soda sulphite, anhydrous.....	75 grms.	1½ ozs.
Hydroquinone.....	8 grms.	70 grs.
Soda carbonate, cryst.....	60 grms.	1¼ ozs.
Potass-bromide 10 per cent. solution.....	5 c.c.s.	40 minims.
Water, hot.....	1,000 c.c.s.	20 ozs.

The water should be boiled before use, and employed after it has cooled a little.

A developer of hydroquinone alone may be used, since the preliminary bathing of the plate in the desensitiser greatly accelerates the developing-power of the hydroquinone, particularly if the bath contains potass-bromide. It then yields results which do not suffer from excessive contrast; in fact, the results are closely similar to those obtained with metol-hydroquinone.

Fog is conspicuously absent, and development can be continued as long as required, working either on the factorial or time system, or, according to the method by which the progress of development is judged, by the change of the image from a negative to a positive.

As soon as development is finished, it is seen that the Autochrome film retains a certain quantity of the phenosafranine, which gives it a yellowish tint. This coloration cannot, of course, be allowed to remain in the Autochrome transparency, but it disappears in the reversing bath of acid permanganate. The phenosafranine has no injurious action whatever on the rendering of the colors by an Autochrome plate.

After rinsing the plate for thirty seconds in clean water, it is placed in the customary reversing bath made up of potass-permanganate and sulphuric acid, the reversing action being followed in full light.

M. Cæron dwells particularly upon the advantage of the desensitising method in the treatment of Auto-

chromes. Apart from the elimination of fog, there is, he finds, an advantage in the satisfactory use of plates which have exceeded the time-limit allotted to them by the makers. Moreover, he is inclined to think that stronger results are obtained when the plate is desensitised, and that thus better results are obtained when exposure has been somewhat cut down.

British Journal.

Hypo-Strength and Economy

ALTHOUGH it is an unwise policy from every point of view, to be sparing in the use of hypo in the making of negatives and prints, yet, there are ways of wasting hypo which, perhaps, are unsuspected by many photographers, cautions a British cotemporary. It is imagined that the mere use of plenty of hypo-solution necessarily implies that ample provision is being made for efficient fixation of prints. Nevertheless, the manner in which prints are handled may do much towards wasting hypo, and, what is worse, creating a false impression that all is well as regards fixation. We have often seen an assistant in a printing-room transferring prints from the developer to the fixing-bath without a pause, so that the latter is continuously diluted by the developer or by the wash-water, in the case in which an intermediate washing is given between developing and fixing. It is scarcely realised to what a considerable degree the hypo-solution is reduced in strength by this practice. The amount of developer or water conveyed into the fixing-bath is not noticed, for the reason that, in removing prints from the fixer the same procedure is adopted, a considerable quantity of hypo being removed through omission to allow each print to drain before transferring it to the wash-water. Thus, in the course of a day's continuous work, the fixing-bath can become greatly reduced in strength; not as the result of performing its proper work in dissolving the surplus emulsion, but through physical transference of the hypo into the washing-tank. As a result, the hypo-bath comes into a weakened condition, in which it is likely to produce prints which within a little time will show the brownish stains characteristic of imperfect fixation.

Lettering Kino-Diapositives

MAX PENSER of Berlin has taken out a patent in Germany for a method of preparing introductory diapositives for kino-films. Heretofore, these have been made only by photographing large designs made specially, so that most films have had to go without any effective introductory notice referring to its own text. By this invention the motion-picture theaters can prepare in a few minutes an announcement for each film from a written copy. For this purpose light-sensitive diapositive plates are used, on the coated side of which the announcement is written with the point of a needle mounted in a wooden handle and heated over a spirit-lamp. When this written diapositive is shown the lettering appears white on a dark ground; or by introducing a strip of colored glass in front of the diapositive it may be shown in any color desired.



OUR CONTRIBUTING CRITICS



A RURAL BRIDGE

EDGAR S. SMITH

YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the last day of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

The keynote of such a picture as Mr. Griffiths has attempted in his "Read Me To Sleep" is ease and relaxation, and these elements seem to me to be lacking in his photograph. Perhaps, I am personally prejudiced against the type of hammock depicted, but I think that it would be a physical impossibility for the lady to fall asleep while the child remains with her in the hammock—considering the tendency that it has to crowd them together. A better arrangement, perhaps, would have been to have the child sit beside the hammock rather than in it.

Now let us study the figures. The child's pose appears to be natural enough, although we have the uneasy feeling that if she isn't careful she will fall over. But note the lady's tense attitude, the unnatural, forced smile—you almost imagine that she is holding her breath until the click of the shutter releases her from her strained pose. Her coiffure, too, gives one the uncomfortable impression that it makes a ridge under-

neath her neck which prevents her head from leaning back on the hammock. Then her folded arms, beside giving her a set attitude, strike one as scarcely conducive to repose and slumber—although it is, perhaps, possible to sleep in that position. How much more graceful and unselfconscious would she seem, had she carelessly flung her right arm above her head, while her left hand rested on her bosom. The picture, then, would have at once attained a spontaneous note which now is lacking. Unfortunately for the composition of the picture, Mr. Griffiths did not photograph it from the other side of the hammock. Of course, that would have necessitated rearranging the figures, but it would also have eliminated the unsightly veranda-railing and the other distracting accessories in the background, thereby greatly improving the scene. Another improvement would have been to include the supports of the hammock in the picture.

Moreover, the picture is a trifle out of focus and underlit. The texture in clothing and hammock and details would have registered better had the exposure been somewhat longer, or by increasing the exposure and reducing the size of the diaphragm. Themes, such as this—in which human beings are portrayed—are, as a rule, quite difficult of rendition, especially for the novice, as the models generally assume poses which



THE PICTURE CRITICISED THIS MONTH

are at the same time awkward, selfconscious and unnatural; but patience, practise and study together accomplish great things.

A. E. TRAHAN.

It is one of the hardest things in the world to get away from a pose in snapshot-photographs when the subjects are conscious that the picture is about to be made. To do so requires finished artists, both before and behind the camera. This picture bears all the earmarks of a pose.

The title is "Read Me To Sleep." This naturally presupposes one party in a restful, relaxed attitude and another in the act of reading. What do we find? "Auntie" is not comfortably stretched out in repose—half awake, half asleep. On the contrary, one gets the impression that with her, every nerve is on the alert, every muscle taut, ready to jump up the moment the shutter clicks. Nor is the attitude of the reader convincing. A person settled down to the task of reading another to sleep would assume a more natural, business-like attitude. One feels that this girl has simply sat down for a second. A girl who is really reading would hold the book differently. In reading, one moves the lips. This girl's lips are drawn tight; not a sound seems to issue or could issue from them in that position.

Suggestion? First, get away from that horrid background with its heavy, straight lines and un-comely angles. Secondly, catch your subjects unawares.

E. L. C. MORSE.

THE major fault in Mr. Griffith's picture, "Read Me To Sleep," lies in the composition. There is no union between the two models, and too many lines, running in all directions, cause the eye to gyrate aimlessly from one feature to the other, never resting very long on any one, finally ending in the background, carried thence by the lines of the piazza.

Nor is the position of either of the models restful, particularly the older. She appears strained, and both seem to sense the presence of the camera. The piazza

and the detail in the background, particularly the chair in the lower right corner, are very objectionable, for they detract from the center of interest.

Were the mother (?) reclining at full length upon the hammock with the girl seated close to her upon a chair, so as not to disturb the sleeper when she has fallen asleep, and a point of view chosen farther to the left so as to exclude the piazza, the composition might be improved.

Technically, the lighting is too flat—resulting in no shadows and poor modeling in the face of the sleeper. Also the focal length of the lens is too short for this viewpoint, as shown in the exaggerated height of both models.

Carefully planning the picture—first eliminating obtrusive detail, then bringing the models in closer compositional union and, finally, selecting the proper viewpoint, should result in a good picture, for the theme is good, but the present treatment is poor.

J. CARROLL TOBIAS.

The picture, "Read me to sleep," is evidently more of a record-picture than one noted for its pictorial qualities. To me, the attitude of the lady seems strained. Then, perhaps, the fact that the viewpoint shows the lady's face from below makes it look unnatural, as one usually looks at a face from a viewpoint nearer level with the face. The little girl appears to much better advantage, and has a pleasing appearance and a very natural and unaffected pose. The background is rather obtrusive, especially the piazzarailing, which seems to show that the camera was not held level when the picture was made. Measurements show that the palms are vertical in the print, however. The tonal values in the picture appear good, and it is otherwise well done.

A. L. OVERTON.

THE title tends to concentrate interest in the occupation of the reader, thus, in a measure, adding the duality of interest common in photographs depicting

(Continued on Page 24)



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE soft, ingratiating qualities of H. P. Webb's tree-studies—front-cover, frontispiece and pages 178 to 180—will be appreciated by all true lovers of the pictorial landscape. A part of the secret of the unusual beauty of these tree-photographs will be found in the accompanying data:

Cover and frontispiece—March, late afternoon; bright sky; $7\frac{1}{4}$ -inch Vinco lens; stop, F/8; 5-time ray-filter; 1 second; Eastman Speed Film; Edinol; enlarged on Wellington Cream Crayon Bromide; Edinol. "THEY VARY IN SHAPE", page 178; January, just before sunset; dim sun; $7\frac{1}{4}$ -inch Vinco; stop, F/8; 3-time ray-filter; $1\frac{1}{2}$ seconds; Metol; enlarged on Wellington Cream Crayon; Edinol. "SEVERAL TREES IN ONE", page 179; January—late afternoon; $7\frac{1}{4}$ -inch Vinco; stop, F/6.3; 3-time ray-filter; $\frac{1}{2}$ second; Eastman Film; Metol; enlarged on Wellington Cream Crayon; Edinol. "GROUPS OF EUCALYPTUS", page 180; January afternoon; bright; No. 3 Goerz Dagor, back-lens; stop, F/11; quick bulb-exposure; Standard Orthonon; Edinol; enlarged on Ilford Cream Bromide.

Edmund H. Garrett, a landscape-painter and classic illustrator of high rank, also a successful lecturer ("Shakespeare's England" and "Baronial Castles of England"), was one of the first eminent American artists to practise photography in connection with his profession. Long ago he arrived at the conclusion that, among all the developing-agents placed upon the market, pyrogallol or, as it is popularly known, Pyro, was the best. Hence, he was not reluctant to express his opinion in tangible form—a pen-and-ink sketch, reproduced on page 177.

As usual, the pictures used by W. S. Davis to illustrate the points he wishes to emphasise, are clear and convincing. Pages 187, 188, 191.

The pictures (photographs from original paintings executed by a very young pupil), page 199, are but two of a large collection of similar efforts by students of Anson K. Cross's new method of learning how to draw and paint correctly. This method, which can be taught very successfully by correspondence, as well as in presence of the teacher, has been investigated by the Editor and found to be revolutionary in character, as it upsets traditions and theories of teaching art-students how to paint from life. But Mr. Cross's method, as described briefly in his article, is almost unbelievably simple and effective, and, what is of paramount importance, it produces results. And the results, as critically examined by the Editor, are astonishingly convincing.

Herbert B. Turner, photographer, traveler and president of the Union Camera Club of Boston, U. S. A., whose pictures of various climes have appeared with generous frequency in the pages of PHOTO-ERA MAGAZINE during the past few years, has gone a-field, as would appear from his contemplative study of one of nature's moods, page 200. It is a landscape built of strikingly effective masses and well balanced in composition.

Data: May, 1922; 6 P.M.; heavy clouds through which the sun pecked out for a moment; P. & S. Doublet; F/8; 3-time ray-filter; Standard Orthonon; pyro; raining at moment of exposure.

Advanced Workers' Competition

THE Editor regrets that there are some participants in these competitions who neglect to read carefully the advance editorial directions regarding each subject to be interpreted. As a natural consequence such workers often go wrong, and reap only disappointment. The incurred expenditure of effort and material is no small item, either, and PHOTO-ERA cannot be held accountable for results that are purely personal with the disappointed competitor. In many instances, the figure was so large in the landscape, that the pictures came under the class, "Figures in Landscape", meaning that the figure was the dominant interest. In other pictures entered in this competition—Landscapes with Figures—the figures took their proper (secondary) place in the competition, but the landscape did not receive sufficient care. It was sadly out of focus, whereas the figures (or figure) were sharply delineated. Again, there were prints in which the landscape was very complicated, or confused, in design, and that feature sufficed to mar the entire composition. It was but to be expected that some workers would place the figure, or group of figures, in close proximity with a very prominent object, such as a tree-trunk, and, in this way, create a large solid mass, which had the effect of throwing the entire pictorial design clearly out of balance. As it is natural to err, so several participants situated the figure somewhere in the middle distance, making it too small to constitute a feature in the view, or to be even distinctly visible. Then, too, the *ensemble*—principally the landscape—lacked pictorial beauty or attractiveness and, consequently, a reason for being.

Whether by intent or by accident, Mrs. Hayden's prize-picture, "The River", page 203, suggests vividly Corot's style of painting—dreamy, imaginative, charming. The design is, perhaps, a little involved; but the general artistic scheme, indicative of solemn beauty, compels admiration. As to the solitary figure, it occupies just the right spot.

Data: July; afternoon-light; Spencer $6\frac{1}{2} \times 8\frac{1}{2}$ Port-Land lens; at full opening; view box-camera; 1/25 second; $6\frac{1}{2} \times 8\frac{1}{2}$ Seed 26 plate; print, Willis & Clements Platinotype, Black, toned brown with mercury.

In "The Short Cut", page 204, J. Thornton Johnston has expressed pictorial ability of a high order and a direct appeal to the beholder's imagination. The figure—apparently a young woman—is placed with obvious design in the immediate foreground; for she is evidently on her way home, just beyond the hill—not by the main road, but by a "short cut". To some, the trees in the landscape may appear a bit too sketchy. The tree at the extreme right does look a trifle out of drawing, which makes its genus a little difficult to determine. This technical shortcoming is probably due to careless focusing; but as the accompanying data are incomplete, one is reluctant to hazard a definite opinion. As a pictorial composition, however, Mr. Johnston's picture could be improved—the exact position of the figure, the horizontal division of the view, and the atmospheric perspective.

Data: Ideal weather-conditions; Premo No. 12; Kodak Anastigmat F 6.3; stop, F 8; 1/25 second; Film-Pack; elon-hydro; print, Wellington Bromide; Amidol.

"School-Days", page 205, represents F. E. Bronson's artistic ability at its best. In pictorial design, proportions and significance, as well as in technical skill, the picture leaves nothing to be desired. The story-telling interest is centered in the little people wending their way to school along a road that gracefully curves to the left and disappears behind high rocky ground. This theme the jury considered very conventional—and there were many entries having a similar motive—but, on account of the admirable, artistic and technical qualities of the picture, it was deemed worthy of distinction.

Data: 5 x 7 R. B. Cycle Graphic; Goerz F 5.6; K-2 Wratten ray-filter; 1/25 second; Orthonon plate; Haloid print.

Beginners' Competition

THE junior class of competitors has good reason to be proud of its first-prize winner this month. Seldom has a landscape of such impressive beauty of subject been entered in this monthly competition. Page 209. It so happens that the Editor has made pictures in this very same locality—once in 1903 and, again, in 1909. The reader is referred for description and pictures to the July issue, 1906. Cornelia Clarke's view was made from a steamer in the southwestern arm of Lake Maggiore (Majore), Italy. Behind the spectator and a little towards the shore, at the left, lie the Borromean islands of Bella and Peschatori. The beholder is looking across the bay towards the Swiss Alps, the snow-capped group, partly hidden by clouds, being seemingly the Monte Rosa group. In the center, at the end of the lake, lies the little town of Fierolo. At the left is the beginning of Monte Mottarone, which rises to a height of nearly five thousand feet and is a favorite climb for tourists who do more than merely visit the islands. This locality is visited frequently by rain and cloudy weather in the fall, and photographs made at this time possess great atmospheric beauty, as indicated by "After the Storm".

Data: October; 2 P.M.; thin clouds; 3A Kodak (3 1/2 x 5 1/2); 6-inch B. & L. Rapid Rect.; 1/25 second; Eastman film; pyro; print, No. 2 Azo; photograph was made from steamer.

Although portraiture, at-home portraiture not excepted, is by far the most difficult branch of photographic practice, PHOTO-ERA has made it one of the chief features of the magazine. It has published examples by the master-photographers of America and foreign countries, and has specialised in at-home portraiture for the purpose of helping amateurs to perfect themselves in this seemingly easy but in reality difficult art. It is for this reason that PHOTO-ERA likes to recognise the efforts in this branch even of beginners, believing that some of them may desire, at some time, to practise it professionally. But they should not lose sight of the fact that good posing and lighting, appropriate expression, are indispensable to a satisfactory at-home portrait. Indeed, in some respects a really artistic portrait made in the surroundings of the home or the office presents certain difficulties not met in the professional studio where lighting and background frequently remain unchanged—i.e., radically—for months. This may be seen by examining a collection of specimen portraits done by the average professional portraitist.

All the more praise, then, to the unpretentious

amateur portrait-photographer when he succeeds in producing a portrait without serious faults. In comparison with a meritorious outdoor-scene it is a real achievement. In A. H. Scott's simple portrait, page 210, there is evidence of much skill in the management of the head and the light. The position of the youthful sitter is a little awkward, but not entirely inappropriate, if the picture were regarded as a genre rather than a portrait.

Data: July; 1:30 P.M.; bright light; place, shady side of house, blanket for background; Ica Ideal camera 9 x 12 cm.; 13.5 cm. (focus) Carl Zeiss Amatar lens; stop, F 7.5; 1/25 second; Seed Graflex 60 plate; elon-hydro; print, Artura Iris D Rough Mat.

Example of Interpretation

ELSEWHERE, the Editor has declared portraiture to be decidedly the hardest problem in photographic practice. Among other activities—in the sport-line, so to speak—is the photographing of domestic pets. In his regular, monthly advance notice, the Publisher has given helpful suggestions how to approach this, to many, troublesome theme. Let it be read carefully by the uninitiated. It may save some careless amateur a painful bite, scratch or kick, and the Publisher is not prepared to be sued for damages! "Fighting Tom", page 206, an excellent and impressive example of domestic-pet photography, should serve as a warning. *Que cela vous serve de leçon, mes amis!*

Data: November 10; 4:30 P. M.; bright light; 4 x 5 Auto Graflex; B. & L. Tessar F 4.5; used at full opening. Seed 60; pyro; print, Artura Iris C.

Our Contributing Critics

MANY members of our editorial staff of Contributing Critics may expend considerable gray matter before they discover anything the matter with Edgar S. Smith's "A Rural Bridge". Let them and the rest go to it!

Data: 3 1/4 x 4 1/4 Graflex; lens at stop F 6; 1/25 seconds; Graflex Film; pyro in tank; enlargement on P. M. C. No. 3; developed in Eastman M. Q.

A Song of Autumn

Ho for the bending sheaves
Ho for the crimson leaves
Flaming in splendor!
Season of ripened gold,
Plenty in crib and fold,
Skies with depths untold
Liquid and tender.

Far, like the smile of God,
See how the golden-rod
Ripples and tosses!
Yonder, a crimson vine
Trails from a bearded pine
Thin, as a thread of wine,
Staining the mosses.

Autumn is here again
Banners on hill and plain
Blazing and flying.
Hail to the Amber morn
Hail to the hunter's horn
Swelling and dying

—Bill Baker

Autochrome Notes from an Expert

ALTHOUGH the Autochrome process was introduced about fifteen years ago, very few amateurs, at the present time, have taken advantage of this wonderful discovery of Lumière's, and investigated this simple method of producing photographs in natural colors. Of the few who have tried, some have not been altogether successful. It is in an effort to help them that this brief article is written. As mentioned above, the whole procedure is very simple. The writer has many times placed the plates in the rack to dry within four minutes of the time development was begun. However, one must be painstaking and exact, as no slipshod work will produce good results.

Now let us first consider exposure, for the final result depends more on this than any other factor. Autochromes have as much latitude as any other plate; but underexposure must be shunned, as there is no help for it. Overexposure can be controlled within reasonable limits. The manufacturers' manual gives this direction: Average landscape, under a midsummer sun, F/8, noon-time, one second. As I believe in a full exposure, let us give it two seconds. Now we will develop. With what? Well; I have found nothing better or so easy as an E. K. Co. M. Q. tube dissolved in the regular amount (8 ounces) of water. A Series 3 W. & W. safelight is all right to use, if you don't happen to have Virida papers. A timer for seconds is almost a necessity. Holding a small tray behind and out of the light-rays, as the timer points to sixty, we pour on the developer with one sweep. Still keeping the plate in the dark, we watch the timer come to fourteen and examine the plate quickly. The image is just appearing. Place the tray back in the dark, for we know that if the temperature of the developer is 60°, we shall remove the plate in exactly two minutes. Rinse off the plate in two changes of fresh water and place in the reverser. The writer uses nothing except Burroughs Wellcome's reverser tabloids; my experience has proved them to be the best. Potassium permanganate gives identical results, but is messy. Reversal is carried on under a bright Mazda light—preferably 100-watt. This operation takes not over two minutes. In warm weather, it is advisable to rinse the plate directly after reversal and then let it dry before the second development, as the emulsion is quite tough when dry. Let the plates stay in subdued light until dry. Amidol or Dianol is best for the second development, as neither contains carbonate which softens the emulsion.

Second development in Autochrome work is about the same as hypo in an ordinary plate, as it gets rid of the free silver and cleans things up generally. The time consumed for this part is about two minutes. Rinsing in three changes of water completes the work.

POINTERS

If the image does not appear in twenty seconds, develop for three minutes.

If the image does not appear in thirty-five seconds, develop as long as you like. It will never be good, underexposure is the cause.

Keep all of the solutions at as nearly same temperature as possible, including rinse-water. None above 60°.

If the temperature of the air is above 70°, mix a solution of alum (either white or chrome), one oz. to ten of water. Transfer the plate directly to this solution from the developer. Leave for two minutes, then rinse and place in reverser.

Do not handle the plate more than is absolutely necessary. It induces frilling.

If you intend to use your results as lantern-slides, a trifle longer exposure than normal is desirable, as the tendency of autochromes is toward density.

Do not attempt to make an exposure of less than one second. It can't be done.

Do not hesitate to let the Editor know if I have overlooked your special difficulty. I really do better work in the darkroom than acting as chauffeur to a Corona.

W. M. SNELL.

Feminine Ears

WITH trembling knees and frightened looks the studio-photographer has received the disheartening news that feminine ears will be again exposed to public view. He has hitherto enjoyed the freedom of responsibility to perpetuate an ear or a pair of ears, which, but for the charitable hair-puffs—in certain embarrassing cases—would have required the utmost skill and tact to arrange to the complete satisfaction of the sitter.

But the sad news is here reprinted as stated fully by the *Cleveland Plain Dealer*.

"Irene Castle brings the startling information that Paris women are showing their ears. A western world of skepticism greets the announcement. Paris has been guilty of numerous acts of daring, but this—this taxes the imagination. Women, the world has discovered, have calves, some plump and delectable, some that had been better hidden; they even have knees, some dimpled and desirable, some over-inclined to boniness. But who ever suspected our lady fair had ears!

Irene proves the point by uncovering hers, to the amazement of New York. Hesitatingly at first, she confesses, lifting the barrage by degrees, she finally reached the auricularly undressed stage of complete ear-exposure. And what Irene has dared do, countless others of her sex may be expected to emulate. Out with the ears!

Ears, we suppose, are in one respect much like knees; some of them were better covered than exposed. But on the whole it is to be hoped that Irene proves no false prophetess. Women who vote and cling to corsets, wear flat heels and run for office, asking no odds on account of sex, may well, likewise waiving sex-privileges, acknowledge the possession of ears."



How not to suit Everybody

OUR estimable English cotemporary, the *Photographic Dealer*, prints the following and thinks that it can get away with it:

"Getting out this journal is no picnic.

If we print jokes, folks say we are silly; if we don't, they say we are too serious.

If we publish original matter, they say we lack variety; if we publish things from other papers, we are too lazy to write.

If we stay on the job, we should be out rustling advertising; if we rustle for advertising, we are not attending to business in our own department.

If we don't print contributions, we don't show proper appreciation; if we do print them, we are accused of filling up with trash (trash).

Like as not someone will say that we "lifted" this from an exchange. So we did."



ON THE GROUNDGLASS

WILFRED A. FRENCH



Selling Pictorial Enlargements

OUR editorial in the August issue suggesting how a photo-pictorialist may derive a separate income by selling framed enlargements of his best negatives seems to have aroused considerable interest. One worker, however, complains that the best two places in his city—the kind we cited as examples—had already been secured by a professional landscape photographer, one wide-awake enough to have acted immediately after having read the hint in PHOTO-ERA. What to do?

We are willing, even eager, to serve our subscribers and readers to the best of our best ability; but we can hardly be expected to look up opportunities for profit other than what come along in a regular and convenient way. Nevertheless, the sale of technically superb enlargements of striking, unusual subjects—as already described—may be conducted in high-class book-stores that have surplus wall-space. We saw such a one, recently, in Boston. Noticing a number of large, uncovered areas above book-shelves which extended the length of the store on one side, we broached the subject of decorating them with large, framed photographs of attractive subjects, but to be sold to whomever they appealed, and to be immediately replaced by similar pictures. The suggestion was received with favor, and the manager of the place is waiting for the right man to come along.

Here then is an opportunity for him who would go out and investigate; and where there is one opportunity, there must be others. It must be remembered, though, that mediocre workers will waste their time and energy.

Photographic Aberrations in Nature

THERE was a time, which many PHOTO-ERA readers may recall, when a single object was photographed quite sharply, and everything that surrounded that object was blurred or out of focus. The result was quite unsatisfactory to the beholder who complained, and justly so, and desired to see every object in the picture clearly defined; whereas the photographer retorted that his picture was true to nature, for, *that was just the way he saw it!* He was right, in a way; for the human eye, with its optical limitations, has not the power to see all the visible planes in focus at the same time. It wanders all over the view from spot to spot, and if normal, will have seen distinctly everything that is visible.

But the photographer who uses a type of soft-focus lens that renders objects with double outlines, or a thin, light border, cannot truthfully assert that this effect is seen in nature; nor is the defect known as halation a strictly correct transcript of nature. Photographs—generally of the high-speed variety—which depict figures in action relieved against a background of trees or foliage, often show round, white spots known as circles or disks of confusion. These are also technical defects, pure and simple. The eye does not see them, for they do not exist, except, of course, in imperfectly executed photographs or in the image reflected on the groundglass focusing-screen.

Nevertheless, these two kinds of photographic imperfections *do* exist in nature, only in another form. If you will examine your own shadow, as you go along the street, when the sun is low behind you, you will notice that the outlines are marked by a thin border, a little lighter than the shadow proper—a sort of penumbra effect, as it were. In fact, the shadow of any opaque object, as seen on a smooth, light surface, produces this effect, which closely resembles the thin border characteristic of an inadequate soft-focus lens.

As I was walking along a Back Bay street, on my return from the Art Club, about two o'clock, one day, recently, I happened to look at the strong shadow of a young English elm cast on the granolithic sidewalk before me, and was not a little astonished to see that it contained a large number of what closely resembled disks of confusion. They were about three inches in diameter. A little farther on, I noticed the shadow cast by a small, slender-trunked maple, which also contained a large number of these disks, only they were smaller. Overcome by curiosity, I examined the shadow of the third tree. This was composed of innumerable light, jagged areas of polygonic shape which are seen in trees or masses of foliage that form the background of certain high-speed photographs.

Elsewhere, on examining the shadows cast by low barberry hedges, I found them filled with countless, similar disks of light, only much smaller—about one-quarter of an inch in diameter. In fact, every species of tree—maple, beech, poplar, linden, even larch and other coniferous trees—whose foliage affords openings for sunlight to pass through, will cast shadows made up largely of these curiously formed spots of light each being a reduced image of the sun—the size of which depends upon the distance of the foliage to the ground.

These phenomena are as old as Nature herself; I only wonder if they have been noticed by others interested in or practicing photography. Naturally, from now on until next May, the shadows of deciduous trees will assume a different aspect; for with foliage gone, there will be no opportunity for the solar rays to filter through and cause these curiously shaped spots of light which, for the lack of a better name, might well be termed "disks of diffusion".

His Pictures Shine

DEAR EDITOR:—Most of the pictures you help publish in your excellent and helpful magazine are filled with sunshine. So are your cheerful paragraphs filled with rays of sunshine. But as occasionally there is a picture that has no sunshine, at all, I take the liberty to send you two photographs I have made, of the same subject—a landscape with small lake in foreground. One of these pictures, as you will notice, is bathed in sunshine, the other in moonshine. Take your choice.

Respectfully,

EDWARD BROWN

NEWARK, N.J.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



The Dallas Camera Club

THE Dallas Camera Club was founded a little over a year ago by the association of five earnest workers with a vision of placing Dallas on the photographic map. One was a commercial photographer, another a newspaper man, a third was chemical man for a photo-supply house in the city and the other two were just plain camera enthusiasts. Since that time the club has grown until, at the present writing, the membership stands at thirty-five, and with bright prospects of increasing this figure until the authorized limit of sixty is reached.

At first the club met in the homes of the members; later, through the courtesy of two of the dealers in town, in stores in the city. Now the club maintains its own quarters that consist of an exhibition-room and auditorium capable of seating approximately one hundred people, darkrooms divided for developing, printing, enlarging and special work such as bromoil, gum, carbon, etc., complete developing, printing and enlarging-apparatus is installed, and a studio is in course of construction. A special room is reserved for the ladies—the wives and guests of members. When the darkrooms were built, it was thought best to keep the washing of prints and negatives and the mixing of chemicals separate from the actual developing and printing. The result is that we have what is popularly known as "The Community Bathtub" for washing prints and negatives, and the darkrooms are thus kept dry and clean.

As far as the writer knows, Dallas, Texas, is the only city in the South, with the exception of Baltimore, Maryland, that has a camera club. There are several reasons for this; but the principal one seems to be the temperatures with which we have to contend. We have received exhibitions of pictures from Northern clubs and within half an hour after hanging them, several of the pictures have come loose from the mounts and fallen to the floor. Mounting with glue or white paste, solid, seems to be the only solution of this difficulty. One widely advertised product is practically useless here. Some of the members have delved rather deeply into the hot-water developing-problem and we now have several formulas for developing negatives in water up to 100° without the use of formalin which, as you know, has a tendency to crack the gelatine. One of our formulas, in particular, is remarkable. With it we are able to develop, rinse, fix, and wash in *running* water at temperatures up to 95° without the slightest sign of fog, frilling, reticulation or even softening of the gelatine. We have not yet succeeded in working out formulas for doing this with paper, but are now working on the problem and, no doubt, will finally solve it. The average temperature of the water here is 90° to 92° in summer. The air is considerably higher and the use of ice is rather expensive, not to mention "messy", and, even with ice, it is practically impossible to maintain uniform temperatures. We honestly believe that, when we have solved the paper question, you will see other clubs spring up in the South. In fact, we have received numerous inquiries from people in Fort

Worth, Texas, who want to establish a club but are deterred mainly because of the temperature problem.

Recently, the annual election of officers was held with the result that Mr. A. M. Belsher was elected president, Mr. V. H. Schoffelmayer was elected vice-president, Mr. E. H. Brown was re-elected secretary-treasurer, and Messrs. Wm. C. Morton and H. M. Sutton were elected members of the board of directors to serve with the three officers named.

Several months ago the club opened a school in elementary photography for the benefit of kodakers in general in Dallas and vicinity. Instructions are given in the use of the camera, proper exposure, developing, printing and enlarging. No attempt is being made to inculcate artistic perception, it being our belief that this is or is not a natural instinct in a man. Some will never produce an artistic pictorial photograph as long as they live—except by accident—and others will never produce anything else. So the efforts of the school have been confined strictly to technical detail; and, in spite of the poor attendance, we have been fairly successful in this. Two men joined the club after attending the school for some time, and we believe others will follow. No charge is made for the instruction, it being open to any amateur photographer in Dallas County.

In November the club plans to hold an exhibition of pictorial photography and we hope to give the people of Dallas a new conception of what photography is, or may be. This exhibition will be limited to members of the club, as it is really more of an advertising campaign than a competition. The club holds competitions once a month for the members; but the annual exhibition is intended first, to give the members an opportunity to display their work to the public, and to advertise the camera club. We are well aware of the fact that publicity, the right kind, and lots of it, is vital to the well-being and growth of the club. We shall be pleased to correspond with any reader or secretary of another camera club who may be interested.

E. H. BROWN, *Secretary*.

A Successful Autochromist

Or late, our pages have contained numerous references to the autochrome and to its practical effectiveness in making pictures in natural colors. One interested reader was inclined to think that what was said about the autochrome was a bit exaggerated and that, after all, autochrome-photography was a sort of "catch-as-catch-can" process. In this connection we are glad to call attention to the remarkable success of Will Rounds, The Studio Gardens, 112 First Street, Lowell, Mass. After a long series of experiments, Mr. Rounds succeeded in obtaining a method of developing which has proved absolutely reliable, so much so, that he is virtually sure of a good autochrome every time that he makes an exposure. This enterprising autochromist makes beautiful pictures of gardens and nature-scenes in natural colors and reproductions of paintings and works of art. Also, he has been very successful in autochrome-portraiture. Obviously, Mr.

Rounds *must get results*, because he calls himself an Autochromist and makes this work a speciality in connection with his beautiful Studio Gardens, where one may see and purchase, if desired, *Irises* in great profusion, and also desirable hardy plants, such as *Chrysanthemums*, *Larkspur*, *Foxglove*, *Hollyhocks*, *Forget-me-nots*, *Evening Primrose*, *Goldenglow*, *Sweet William*, *Dahlias* and many others. Visitors are always welcome and interesting descriptive matter may be obtained at request.

The Value of Membership in the P. P. of A.

THERE is no doubt that an exchange of views and good comradeship help us all to a better understanding of ourselves and of others. This is especially true in photography. The test of our photographic accomplishments is made best by an impartial comparison of our efforts with those of others who are acknowledged leaders. By becoming a member of the Pictorial Photographers of America the ambitious worker is enabled to find himself photographically.

Perhaps a brief reference to the purpose of this splendid organization may be of service. It aims to stimulate and encourage those engaged and interested in the Art of Photography; and to honor those who have given valued service to the advancement of photography. The methods employed are to form centers for intercourse and for exchange of views; to facilitate the formation of centers where photographs may always be seen and purchased by the public; to enlist the aid of museums and public libraries in adding photographic prints to their departments; to stimulate public taste through exhibitions, lectures and publications; to invite exhibits of foreign work and encourage participation in exhibitions held in foreign countries; and to promote education in this art, so as to raise the standards of photography in the United States of America. Membership is open to persons, professional, amateur and those interested in pictorial photography. The more every member puts into it the more he will take out of his membership and the stronger and more helpful will become the organization. Readers of PHOTO-ERA MAGAZINE who are eager to advance in pictorial photography and who are willing to do their share to help others to success should write to Jos. R. Mason, corresponding secretary, 611 West 136th Street, New York City, for membership blanks and other information.

The Value of Specialising

Not very long ago a reader asked us to suggest some way whereby he could get out of the photographic rut in which he found himself. He said that he was having fair success with his portrait and commercial work; but, for some reason, he did not seem to be able to stimulate sales. Soon after receiving this letter, we received an advertisement from the well-known firm of J. H. Dallmeyer, Ltd., Church End Works, Willesden, High Road, London, N.W. 10, England, which answered our correspondent's question clearly and helpfully. Briefly, the advertisement called attention to the Dallon Anastigmat Telephoto-Lens and pointed out that by its use it was possible to make out-of-the-ordinary pictures which were not to be obtained with the ordinary lens usually supplied on cameras. The Dallon lens may be screwed in to the front of the shutter after removing the regular lens-equipment. The equivalent focal length of the series of Dallon Telephoto Lenses is approximately twice

the camera-extension. For example, one series employs a camera-extension of only six inches and gives an equivalent focus of fifteen inches or a magnification of two and one-half times over the normal six-inch lens. Our correspondent's attention was called to the simplicity and effectiveness of telephotography with the Dallon and he agrees that in this speciality may lie the solution of his problem. Distant mountains, ships, buildings and close-up studies of inaccessible subjects open a new and profitable field for unusual and attractive pictures. Those who know advise amateur and professional photographers to become acquainted with the possibilities of telephotography. J. H. Dallmeyer, Ltd., will be pleased to be of service and to send descriptive matter to any reader of PHOTO-ERA MAGAZINE.

Des Moines Photo-Materials Co.

It is with pleasure that we call attention to the new store of the Des Moines Photo-Materials Company, 808-812 Locust Street, Des Moines, Iowa. Unfortunately, the announcement arrived too late to be included in the September issue. The enlarged space, splendid shipping facilities and large stock of photographic supplies will enable this enterprising stock-house to serve its patrons to better advantage than ever before. We are confident that readers of PHOTO-ERA MAGAZINE will avail themselves to the service that is offered.

Arthur Warmisham Now a Director of Taylor, Taylor & Hobson, Ltd.

We are glad to announce that Mr. Arthur Warmisham, M.Sc., has been elected a director of Taylor, Taylor & Hobson, Ltd. Mr. Warmisham, during the years in which he has been with this firm, has introduced a number of important inventions. Among these are the well-known Taylor-Hobson Cooke Aviar Lenses, which achieved so much success for Aerial Photography during the late war. It was to these lenses that the president of the Royal Photographic Society referred in his opening address in 1916 when he stated that British lenses had demonstrated at last their superiority over all European makes. Mr. Warmisham also succeeded in producing a Kinema Projection-Lens which transmits more light to the screen than does any other lens of the same diameter. These Kinema Projection-Lenses are rapidly taking their place in the Kinema Trade as the finest obtainable. Mr. Warmisham's abilities will no doubt continue to prove of great value to Taylor, Taylor & Hobson, Ltd.

A Help to the Camerist

In the past few years a number of devices have been placed on the photographic market which have proved of help to the camerist. Those of our readers who use a roll-film camera will be interested in the Optical Divergence Determiner, made by the A. Freeman Pictorial Photo. and Manufacturing Company, Colorado Springs, Colorado. This device helps to obtain perfect vertical or curved lines without fore-shortening or distorting the picture and also aids greatly in composing the picture to advantage. It is virtually to the roll-film camera what the groundglass is to the professional camera. Descriptive matter and further information may be obtained from the manufacturers.

Photographic Exposition in Spring of 1923

It is not necessary to remind our readers of the importance and benefit of the automobile, motor-boat, sportsman, graphic arts, style, business, stationers' and other expositions of a national character. Now it is proposed to hold a national photographic exposition in New York City in the spring of 1923. Whether it becomes a reality or not will depend upon the photographic industry and those who are interested in its growth and prosperity. In addition, it has been suggested that the motion-picture industry be combined with the photographic exposition. It has been pointed out that such an exposition will be of benefit to every exhibitor and to the industry in many ways; first, from a sales-standpoint; second, from the individual advertising that exhibitors obtain; third, and most important, the exposition furnishes a basis for a tremendous campaign of educational propaganda, which arouses interest and stimulates buying on the part of the buyers and the public. Every known publicity plan, of a dignified character, would be used to make the exposition a pronounced success. It is hoped that mention of the matter at this time will lead to a constructive discussion in the trade which will be of benefit to everyone concerned. Those who would like to obtain further information are referred to Mr. Harry A. Cochrane, president, National Exposition Company, Hotel McAlpin, New York City.

True Photographic Teamwork

WE believe that it will interest our readers to know that the author of the article, "Trees that Shed Their Bark," is blessed with a wife who works at his side in his photographic undertakings, with the result that together they produce exceptionally beautiful colored enlargements which are in constant demand. The Publisher received a superbly colored enlargement of a group of eucalyptus trees which Mr. Webb sent with his compliments and, with this evidence at hand, there is no doubt whatever that the photographic teamwork of Mr. and Mrs. Webb is a pronounced success. The photography is done by Mr. Webb who turns over the enlargements to Mrs. Webb who, with rare taste and artistic skill, imparts to the monochrome print all the beautiful colorings of nature. Permanent body-paints are used and in most cases original skies are introduced. Those of our readers who really appreciate first-class coloring, and who would like to obtain one or more of these charming pictures of California, should communicate with Mr. H. P. Webb, 613 El Centro Avenue, Hollywood, California.

Three Facts About Advertising

EXPERIENCE, backed by the law of general averages, proves that the first appearance of an advertisement does not bring business or create much curiosity. The second appearance does little else than suggest attention; the third may mean business, and the fourth may mean more business; the fifth impresses the reader, and the sixth is felt by the advertiser.

The man who expects his advertisement to bring business or create comment immediately is as foolish as the man who finds fault with the water because it does not boil as soon as he starts a fire under it. The strength of advertising is in its latent power.

To discontinue advertising is to destroy a large proportion of the preliminary education of the possible customers who are beginning to feel its influence. Exchange.

Pittsburgh Salon of Photography, 1923

THE Tenth Annual Exhibition of the Pittsburgh Salon of Photography under the auspices of the Photographic Section of the Academy of Science and Art, will be held in the Galleries of the Carnegie Institute, Pittsburgh, Pa., from March 2 to 31, 1923. The exhibition will be open daily 10:00 A.M. to 10:00 P.M., Sundays to 6:00 P.M. Press views Friday, March 2, 1923, from 8:00 A.M. to 10:00 P.M. The aim of the Pittsburgh Salon is to exhibit only that class of work in Pictorial Photography in which there is distinct evidence of personal artistic feeling and execution. All work submitted to the Committee of Selection will be carefully and impartially considered and no preference will be given the work of members of the Salon. All pictorial workers are cordially invited to contribute. For entry-forms and other information address Chas. K. Archer, Secretary, 1412 Carnegie Building, Pittsburgh, Pa.

Studio-Photographer's Dilemma

THE *Boston Post* is running a daily feature, "What Will You See Today?" to which any one may contribute a short account of an original and interesting occurrence. The best one of those printed each day receives a motor-car, the others the sum of one dollar each. Well; Jared Gardner, the enterprising photographer, of Plymouth, Mass., came very near winning a car for a story he sent in recently, a *Post* man told the Editor.

Here is Mr. Gardner's story as it appeared in the *Boston Post*:

This morning a man came to my studio to have his portrait made. After placing the man in the posing-chair, under the skylight, I noticed a large lump on the side of his face which I did not wish to show in the photograph. I tried every light and position that I could think of, but the lump only seemed to be growing larger. At last, in desperation, I made three exposures. As the man arose to leave, he said, "I don't s'pose it made any difference in the pitcher; but I had a chaw o' tobacco in. Where's the cuspidor?"

Sensitometry of Photographic Emulsions

WE have received No. 439 Scientific Papers of the Bureau of Standards, Department of Commerce, prepared by Raymond Davis and F. M. Walters, Jr. This paper deals with the sensitometry of photographic emulsions and contains a survey of the characteristics of plates and films of American manufacture. Part 1 is a discussion of the general characteristics of photographic emulsions; part 2 describes the apparatus and conditions of testing as practised at the Bureau, and part 3 gives data on virtually all brands of emulsions (made in the United States) coated on glass and celluloid, the trade-names of the emulsions being omitted. There are 120 pages of text, diagrams and charts. Copies of this paper may be obtained from the Superintendent of Documents, Government Printing Office, Washington; price, thirty-five cents.

Selecting a Lens

PERHAPS there is no one thing of greater importance in photography than a lens. Plates, films, paper, chemicals—all are valueless until the lens does its work. In short, a lens—excepting the pinhole—is virtually the beginning and the end of picture-making. Obviously, the purchaser of a camera or a lens should

take sufficient time to consider well before he makes a selection. To help the amateur and the professional photographer decide, the Bausch & Lomb Optical Company, Rochester, New York, has issued a booklet, "What Lens Shall I Buy?" Whether the reader is "in the market" or not, he should obtain a copy from his dealer or from the manufacturer. The lens information that it contains is practical, helpful and interesting. To keep well informed is a photographic asset.

Dr. Pardoe Wins in New York Evening Post Contest

THE first prize in the Summer Camera Contest for July, conducted by the *New York Evening Post*, was captured by Dr. J. B. Pardoe. His successful entry—published in the Saturday Graphic section of that paper—consists of a study of a southern colored woman making soft soap. Although our friend, a highly successful D.D.S., has already won several prizes, including one first prize in PHOTO-ERA's Advanced Competition, two years ago this month, he may surprise us by winning another. He is welcome to try again.

The Graphic Arts Exhibition

THE Graphic Arts Exhibition, in connection with the annual convention of the International Association of Printing House Craftsmen, was held in Mechanics Building, Boston, Mass., August 28 to September 2, and was a marked success from every point of view. Every part of the great building was utilised, and there were exhibits of every kind of machinery for the production of printed matter, from the making of the paper to the binding of the completed job, including the making of the ink and plates, setting the type, presswork, folding, binding and trimming, so that complete books were printed and bound at the exhibition. Among the many thousand samples of high-class printing from all parts of New England which were on display, PHOTO-ERA MAGAZINE was in evidence at the booth of the Geo. H. Ellis Co., Inc., of Boston.

Now, although photography is included among the graphic arts as well as the fine arts, it was scarcely represented at the show. An examination of the official list of exhibitors revealed none but photographically allied (near and distant) industries, including pre-eminently photo-engraving, photogravure, photolithography and multiple-color printing; whereas by going the rounds of the booths and stands, we unexpectedly met the Maynards, commercial photographers of Boylston Street, Boston. They had a goodly exhibit of admirable prints, mostly outdoor-work.

It was pleasant, also, to notice among the regular exhibitors those who contribute materially to the production of PHOTO-ERA MAGAZINE each month, viz., The Whitaker Paper Company, The Geo. H. Ellis Company, printers, and the Boston Mailing Company, binders—all of Boston, Mass.

Sixth International Salon, Los Angeles

WE are pleased to call the attention of our readers to the Sixth International Salon of Photography, to be held under the auspices of the Camera Pictorialists of Los Angeles at the Gallery of Fine and Applied Arts, Los Angeles Museum of History, Science and Art, Exposition Park, Los Angeles, November 20 to December 11, 1922. Entry-forms and other information may be obtained from N. P. Moerdyke, secretary, 811 Washington Building, Los Angeles, California.

More about Horizontal Scratches on Roll-film Negatives

Editor Photo-Era Magazine: Referring to Answers to Queries Dept., Sept. issue, subject: O. C. M.—"Horizontal Scratches on Roll-Film Negatives," permit me to advise that I recently experienced similar difficulty with these scratches. I also located the trouble and corrected, or rather overcame it, and inasmuch as it was due to a different cause from that cited in your reply to O. C. M.—I thought that, possibly, his trouble might be similar to mine and that you might care to pass on to him a little more "dope."

In my case, I found the trouble to be in one of the two small rollers over which the sensitive side of the film passes, found at each side of exposure area, in back of camera. One of these I found to be not revolving freely enough to turn with the passage of the film over it, and though very minute, there were small particles or rough places on this roller, sufficiently sharp to mar the delicate surface of the film and streak it as it passed over.

The roller was found to be set too close to the wooden frame-work in the back of the camera, and was rubbing on same. After removing the roller, and paring off a small shaving from the frame, and re-blackening the cut surface, my troubles in this line entirely vanished. The thought occurred to me that, possibly, O. C. M. might be experiencing the same difficulty.

Yours very truly,

CHAS. Z. VAUGHAN.

Mars and the Camera

FORTIFIED with a powerful telescopic camera, "L'œil télescopique", French astronomers hope to obtain proof of the existence of life on our nocturnal satellite. In this connection, it may interest amateur astronomers to know that if they own ten-inch telescopes they can obtain more satisfactory results, particularly when observing Mars, than do the big lookers with their gigantic apparatus at the Mt. Wilson and Flagstaff observatories. This was proved conclusively during the universal examination of the Martian surface last June, which was made with telescopes from the largest to the smallest. Next year, Mars will be still nearer, and, in 1924, at its minimum distance from the earth, viz., about 35 million miles. What a chance, then, for our astronomers who have 10-inch telescopes!

One Way to Do It

ONE of our advertisers was giving a lecture in New York City, quite recently, on the subject of photography as a profitable sideline. He showed that almost any one of intelligence, energy and resourcefulness could use his spare time, especially evenings, in making pictures at a person's home, office or studio and make quite a bit of money outside of his regular business. If very successful, and having a business not particularly remunerative, he could give it up, and make his photographic sideline his regular and only vocation, as many others had already done. "But at first, do it on the side, on the side!" the speaker declared with emphasis. He then stopped to see a small, middle-aged man in the rear of the hall, evidently hard of hearing, lean forward and, cupping his ears with his hands, ask in a loud tone of voice, "Do it on the sly, did you say? Do it on the sly?"



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

PRACTICAL COLOR-PHOTOGRAPHY by E. J. Wall, F. C. S., F.R.P.S. 248 pages. 27 drawings. Tables of conversion of weights and measures, bibliography and index. Price, cloth, \$3.00. Boston: American Photographic Publishing Company, 1922.

There is no question that the day is coming when most pictures made by photography will be in natural colors and that the processes required to produce them will be within the mental and financial reach of the average amateur photographer. Slowly but surely, this day is drawing nearer. One has but to read "Practical Color Photography" by E. J. Wall to become aware of the remarkable progress that has been made in the past few years.

In this latest addition to the works on color-photography, Mr. Wall confines himself strictly to methods and formulae which he has tested personally in practise. As far as possible, all historical and theoretical data have been omitted. In short, the book is filled almost exclusively with tried-out facts that will enable the reader to step into a darkroom with the assurance that what he has read will help him to make a success of color-photography. There are nineteen chapters of practical information. Among these may be mentioned The Spectrum, Sensitive Plates, Color-Filters, The Darkroom, The Camera and Exposure, Subtractive, Imbibition, Relief, Mordanting-and-Toning Processes, Three-Color Lantern-Slides and descriptions of the Lippmann, Seebeck and other processes. The final chapter discusses Kinematography in Colors with a review of its history and a consideration of its future possibilities. The table of Conversion of Weights and Measures, Bibliography, Possible Sources of Various Dyes and Index complete a volume that should be in the hands of every "still" or motion-picture photographer who wishes to be well-informed. Mr. Wall's descriptions of processes are written in a clear, non-technical style that will enable the average reader to grasp the subject without constant reference to the dictionary. The book is well printed and neatly bound in red cloth.

TELEPHOTOGRAPHY—by Cyril F. Lan-Davis, F.R.P.S. Second Edition, revised by Lionel Barton Booth, M.A., F.R.A.S., F.O.S.; 114 pages; seventeen full-page illustrations and seven diagrams and index. Biographical sketch of the author; Price, stiff-board cover, \$1.00. London: George Routledge & Sons, Ltd.

In photography, there is no more fascinating branch than telephotography. The ability to photograph distant mountains, ships at sea inaccessible points of interest, is a constant source of delight. In addition to these uses, the telephoto-lens is of great value to make pictures of subjects close at hand. Even in portraiture, its use helps to avoid distorted hands and feet. Also, these lenses are of great service to reproduce jewelry, specimens in natural history, for astronomical

study, solar photography and to make pictures of small objects of all kinds. Commercially, the telephoto-lens is a distinct asset to the photographer who wishes to make and to sell pictures that are out of the ordinary.

In Mr. Lan-Davis' practical and interesting little volume, we find the basic principles of telephotography set down clearly and thoroughly. By means of illustrations and diagrams, he shows the advantages, as well as the limitations, of the telephoto-lens. In six chapters Mr. Lan-Davis considers his subject from every angle. He explains what is meant by the scale of a picture, positive and negative lenses and telephoto-lenses in relation to distant objects. He describes fully some commercial telephoto-lenses, variable types, and devotes considerable space to the telephoto-lens in relation to near subjects, exposure, depth of focus, perspective and the swing-back, telephotomicrography, simple measurements, calculations rules and tables. In the last chapter there is much practical information under the head of working-data. The reader is made to feel that telephotography is within his grasp; and so it is, if he will follow the practical advice of Mr. Lan-Davis.

Photo-Era Competitions Helped Him to Succeed

LUSCAR, MOUNTAIN PARK BRANCH,
ALBERTA, CANADA, July 26, 1922.

DEAR MR. BEARDSLEY:

It may interest you to know of the success I have been having recently with my photographs in exhibitions and competitions. In the Calgary Industrial Exhibition I entered in three classes, one entry only in each of Enlargements and Group of Six Pictures, exposed, developed and printed by the exhibitor, and two entries in the class of Moving Objects. I took three first prizes, the prize-winner in the Enlargements being the picture of the Irises which was given Honorable Mention by PHOTO-ERA MAGAZINE in the May, 1919, competition, but has never yet been published. In the Edmonton Exhibition I entered in only two classes, but took both first and second, only two prizes being given. In the class of Enlargements, the first prize was awarded to the Moonlight which was used by PHOTO-ERA MAGAZINE as a cover in July, 1920. One of the judges told me that this is the finest picture that has ever been exhibited here, and it did not take them but a moment to decide the prize-winners. The other class was Nature-Photography, in which I entered a card bearing sixteen of my pictures of birds, but my only competitor entered no less than fifty-five, and in many cases these were of rarer birds, so that he was given first. This same judge told me that my work was superior both artistically and photographically, but the number of his pictures really swung the verdict, though they had to take a second day to decide. As he has had some sixteen years' experience, and all mine are this year's work, my first in this department, I am well satisfied to have made them think twice. In a competition run by the Edmonton Camera Club, which closed July 17, my Irises took first again, and the judges had no difficulty to arrive at this decision, though there were over one hundred prints submitted, some of a very high order of merit. As this is the first exhibition I have ever done, and I have entered in no competitions save those in PHOTO-ERA MAGAZINE, I am very much pleased with my success.

Sincerely yours,

J. E. HORNING.



LONDON LETTER

CARINE AND WILL CADBY



PHOTOGRAPHY has come again to the aid of the newspapers during the printers' strike that is disorganising, and in some places stopping altogether, the publication of important newspapers. There is nothing like a change. It must have been somewhat diverting, and even attractive, for readers to open their morning-paper, and instead of the deadly regularity and sameness of make-up to which they are accustomed, find a variety of methods used in its production. For instance, the *Sheffield Daily Telegraph*—an important newspaper in its district—had an issue that consisted of four pages of the ordinary size, with some of the week-end news, a leading article, and ten columns of advertisements set in the usual way. The rest of the paper was composed of pictures, and more than seven double-columns of photographed typescript, reproduced by means of process-blocks. The *Bristol Times and Mirror*, although informed only three hours before the normal time of beginning work that their compositors were going on strike, brought out an eight-page paper which had a page of typescript reproduced by photogravure, "Beautiful Bath," as the town is locally and lovingly called, published no papers at all, and crowds assembled at the offices to read the telegrams displayed. Needless to add, a Bath Wireless Club has been formed.

But, since the war, people take such trivial interruptions as the abrupt cessation of the daily news with comparative composure. We grew used to far more serious inconveniences then, and the habit of patience has evidently come to stay. If, as it is hinted, the strike will interfere with the publication of the August railway-timetables—the general holiday-season—and the printing of the minutes and documents of the Wesleyan Conference, now taking place at Sheffield, as a nation we are not perturbed.

Houghtons Ltd., the wholesalers who supply virtually everything photographic of British make, besides being manufacturers themselves, have issued a new professional catalog, lately, which in size and comprehensiveness marks our gradual return to normal times. It is profusely illustrated, and the subjects treated range from darkroom-pins to photographic machinery. Although the book is double the size of the last catalog sent out, completeness is not claimed for it, so various and multitudinous are the photographic veterans of the present day. Houghtons also issue a monthly paper called *The Professional Bulletin*. In the last number of this live, little magazine, a new feature has been added in the shape of short humorous stories by Alexander Mackie. Each tale illustrates and elucidates clearly some knotty point that is likely to trouble photographers. One treats of the penalties to be suffered if the darkroom-tan is left running "in that pretty, silent stream that looks like a crystal-rod," when the Water Board inspector discovers the extravagance. Another shows how necessary it is to register the fancy name given to a studio under the Business Names Act, if there is likely to be litigation; and a third makes clear the positive copyright of the sitter in all negatives made in pursuance of an order, whether actually ordered for or not. The entire magazine shows that business is, at last, getting into its stride, and that healthy competition is stimulating enterprise.

We are glad to see that Mr. Pirie MacDonald is among the Judges of the Pictorial Section of the forthcoming Exhibition of the Royal Photographic Society. It is all to the good that occasionally one country should have the benefit of the mature experience of distinguished pictorial workers from another, as it must tend to broaden views and prevent a too close adhesion to what is often a passing and local style. The other members of the Judging-Committee are Marcus Adams, Bertram Cox, J. Dudley Johnson, Alexander Keighley, Herbert Lambert and J. Furley Lewis. It is a strong committee, and if plenty of good work is sent in, should result in a Pictorial Section of high quality.

Thanks to those energetic and enthusiastic members of the Professional Photographers' Association, Messrs. R. N. Speaight, Marcus Adams and Alexander Corbett, the Annual Congress, which is to be held at Prince's Gallery from September 11 to 15, promises to be a great success. Also coming, as it does, at the beginning of the autumn, it may attract American visitors to exhibit their work or their goods. It has been suggested that one afternoon should be spent in visiting the Salon and the Royal Photographic Society, whose exhibitions will be on at the same time. There is evidently going to be a perfect "jumboree" of photography and photographers in London next month, and we are led to expect all kinds of amazing and exciting developments from such purposeful meetings.

Mr. A. C. Banfield, at a meeting of the Royal Photographic Society's Pictorial Group, has been advocating the 2½ x 3½ in. reflex camera for the serious tourist-photographer. With such a camera as the Soho reflex, he is able to employ lenses with focal lengths varying from 4¼ to 12 inches. This confirms our notes of last month in which we dwelt on the present popularity of the small camera, especially for traveling. As to the battery of lenses, no doubt Mr. Banfield is right for the very serious worker; but there is another side to the question. Over and over again, we have met photographers on a holiday-trip with delightful and complex armaments of lenses, that demonstrated the last word in ingenuity and comprehensiveness. But we often noticed that the extra lenses, which in theory would suit any subject encountered, had a way of lying quiet and undisturbed in their velvet-cases. We, ourselves, must confess in bygone days to having carried a very respectable variety of lenses, that were too often in the ranks of the unemployed. But, alas! man is weak and fallible, especially on holiday, and there will often be some seemingly, at the moment, good reason why it is, or appears to be, impossible to plunk down our kit and change the lens. The light may be weakening, and we are sure the atmospheric effect will have gone if we hesitate; or the picturesque figures, that are just in the right place, will have moved on. And so we compromise; not, perhaps, being in the class of the most serious photographers. We reduce our outfit to the simplest, taking what the gods give us; for after all, pictures can be made with the most ordinary camera.

The reduction in our home postal rates, of our letters and 1d. on postcards, we hear has stimulated enormously the sending of both cards and letters and

Continued on Page 23



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the law offices of Norman T. Whitaker of Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The patents mentioned below were those issued during the month of August from the United States Patent Office, the last issues of which have been disclosed to the public.

Walter Pack of Takoma Park, Maryland, has received patent, number 1,424,736, on a Sensitized-Element Package for Photographic Apparatus.

Combination Film-Camera and Developing-Tank has been granted to Anthony F. Grillon of Rochester, N.Y., patent, number 1,424,816.

Patent, number 1,424,873, a Film-Treatment Cage has been issued to Augustus G. Boxell of Los Angeles, California.

Leon F. Douglass of Menlo Park, California, has invented a Method and Apparatus for Producing Multiple-Image Effects in Photography, patent, number 1,424,886.

Automatic Electric Film-Cutter has been issued jointly to Arthur W. Miller of Roselle Park and Walter L. Conklin of Boundbrook, N.J. Patent, number 1,425,405.

Patent, number 1,425,450, Film-Printing Machine, has been issued to Gaston L. Chanier of Jersey City, N.J.

Henry R. Evans of London, England, has received patent, number 1,425,461, on an Apparatus for Printing Motion-Picture Films.

Photographic Printing Apparatus patent, number 1,425,526, has been granted to William C. Huebner of Buffalo, N.Y.

Patent, number 1,425,636, has been issued to Philibert A. M. Dubief of Courbevoie, France, on an Apparatus for the Reproduction of Drawings by Artificial Light.

Rudolph Klein of Rochester, N.Y., has invented a Photographic Shutter patent, number 1,425,980.

Patent, number 1,426,117, Photographic-Printing Machine, has been issued to Julian H. Smith of Seattle, Washington.

Isidor Kitsee of Philadelphia, Pa., has invented two patents, first, number 1,426,395, on Process of Producing Multicolored Screens for Photography. The other, number 1,426,996, is on a Method and Apparatus for Matrices and for Producing Color Screens therefrom.



Our Contributing Critics

(Continued from Page 213)

two models. But this merit is vitiated by outstanding defects. Note the position of the subjects' heads; what is practically a horizontal line starts at the left margin and runs across the print, the stripe in the hammock being the terminal segment. The heads thereon are like two spheres strung on a wire. A short-focus

lens has greatly distorted the nearest plane; moreover, the focus is not well taken, and the background, sharper than the faces of the models, clamors for attention. Neither model is well posed. We doubt that the lady, even when read to sleep, will be able to slumber comfortably. The lighting is flat; flesh-values, nil; other values little better. Variety of tone necessary to give life wholly lacking.

BERT LEACH.

THE picture this month is difficult to criticise because one experiences difficulty in finding a starting-point. Generally speaking, a picture can suffer only three main faults: composition, theme and technique. Sometimes, however—as in this case—the effect produced by a picture may be very displeasing and yet difficult to analyse.

I believe that the most flagrant fault in Mr. Griffiths' picture is the ungraceful position of the lady reclining in the hammock. This effect is due, no doubt, to foreshortening. The young lady absorbed in her reading does not know that, in leaning to the left, she is assisting in the general effect of unbalance. Both of them seem in danger of falling, although the upward curve of the hammock helps a little to counteract this tendency. Still, one's mind is not at ease; for the hammock has no visible means of support. The balcony, with its obtrusive lines, insists on carrying the eye up into the upper left corner, whereas the eye very naturally desires to remain and watch the impending fall. As a result, we have an annoying, if not painful, conflict. Commendable in this print, however, are the soft tonal qualities. Had the photographer been as successful with the artistic as he was with the technical side, there would be general praise.

GEORGE A. BEANE, JR.



London Letter

(Continued from preceding page)

should do something to revive the picture-postcard business that has been languishing under the absurdly high inland postage of 1½d. From a continental source we glean that we are likely soon to revert to penny postage for letters up to one ounce in weight, and it is also forecasted that a similar price will be charged to the United States in the near future.

There is talk of a First Irish Salon of Photography in the Metropolitan School of Art, Dublin, in August; but unless the Irish Parliament has been able to meet, and things are more settled, it seems hardly likely that Irish people can devote their minds to such a peaceful pursuit as photography. However, feeling between the National Army and the Irregulars seems so good, that in spite of the shootings and the wide destruction of property, we should not be surprised, when once hostilities cease, if the contending elements devoted their attentions as energetically to the successful running of the First Salon as they have to the breaking of each other's heads.



AT ANCHOR
F. W. G. MOEBUS



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The Tale of a Portrait-Lens

AUGUST KRUG



AFOREBEGONE and pathetic behind the unwashed plate-glass window it lay, a symbol of outworn usefulness. Wearily it seemed to shrink within the tarnished brass of its mount, and the clear glass in its cells was dulled with the passing of years. There was not a more uninteresting, drab unit among all the heterogeneous collection in the show-window upon which fell the shadows of the three golden globes swinging idly over the shop-entrance. It consorted, unwanted, forgotten, and all but obsolete, with the discarded and undesired of a hundred different fields of labor.

A cheerless picture, indeed, with an outlook no less cheerless; yet, what of the past? Who can tell of the lineaments the old-fashioned lens has drawn—rich man, poor man, beggar-man, thief: with what willingness it had responded to the touch of the skilled finger upon its focusing-pinion, endowing with permanence the fleeting expression? In its half-century or more of existence, how many mortals have there been with cause to thank that derelict bit of glass and metal for its part in producing a faithful likeness of a departed loved one?

On one side of the plate-glass partition, the march of Time proceeded undisturbed—measuredly—dustily—why bother to keep the window clean when the dust, by concealing defects under its kindly coat, increased the prices to be asked for the articles which had found their way to this port of unavailing hopes?

Outside, the tide of traffic roared and rumbled along the Bowery, detaching now and then an individual who would gaze perfunctorily over the dingy assortment in the window, unmoved, for the most part, by the calipers, accordions, umbrellas, drafting instruments or lenses, yet, yielding to the fascination of the hock-shop window which Man finds it so hard to resist.

From the time he stands, as a boy, with a heart yearning for the battered brass-cornet hanging beside trays of unnoticed jewelry, up to the memorable occasion when his wife sees fit to warn him, in no uncertain phraseology, of the inadvisability of spending too much time in front of the loan-office, lest public opinion incline to the belief that he has just emerged therefrom, the lure of the hock-shop window with its tarnished treasures is potent, indeed.

It drew the Youth, one fine Spring afternoon. He was sauntering easily down the Bowery, on his way from Cooper Union, refreshing himself by passing glimpses of the window-displays which line the avenue, those of dingy pawnshops alternating with those of the most modern of electric lighting-fixture establishments, garish in their artificial brilliance. He stopped before our pawnshop, perhaps because it was a trifle dingier than the rest, and stood for a few minutes looking at the lens, peering through the dimmed glass which shut him off from it. The sun shone brightly into the window, and the three dancing, circular shadows lent a sparkle to the tarnished brass which finally made up the Youth's mind for him, for he turned suddenly and entered the dingy-looking shop.

A small, dark scion of the tribe of Judah stood rubbing his hands behind the counter, waiting until the Youth's eyes should accustom themselves to the change from bright sunlight to semi-darkness. An oily smile adorned his sharp features: here was a gentleman-customer come to buy, not one of those hard-ups trying yet to swindle an honest pawnbroker out of seven dollars on a gold watch that is worth no more even than thirty dollars.

"Eh! G'd afternoon," said he finally, never ceasing the circular motion of his hands, the one within the other. "What will you have I should do for you today?" This was calculated to make

the Youth feel at ease, as though he were an old and valued patron of the house.

The Youth, however, was somewhat diffident. This was an experience for him, since pawn-shops were rather out of his line. "Why," he said uncertainly, almost regretting the impulse which had brought him to the shop, "I would like to find out the price of one of the lenses in the window there—"

"Sure, yes!" came the ready assent. "Which one was it you was meaning?"

If the Youth had been more accustomed to the usages of purchasing in pawn-shops, he would not have indicated his choice as readily as he did. For in such emporiums, the price of an article is in direct proportion to its desirability, or, in other words, its value to the buyer. The seller's intuition in respect to this value is uncanny, and with the inherent aptitude for bargaining possessed by the race, the purchaser who saves money is fortunate, indeed. There is, however, as the man who loves to mix proverbs would say, a Providence watching over those who rush in where angels fear to tread, and this Providence provided for our Youth.

Giving the lens a surreptitious wipe, as he removed it from the window, the pawn-broker set it down between them on a little felt-mat, and delivered himself of a modicum of sales-talk before permitting the Youth to handle it. "Such a fine lens they don't make it no more nowadays. Feel how heavy and strong it is!"

The Youth weighed it in his palm, and it was even as claimed. With mind educated from much looking in at photo-supply house windows and much reading of books photographic, he was inclined to doubt, however, that the excessive weight was an advantage or that the modern lenses were so much inferior. He therefore held his peace, having wit enough to classify the statement in its proper place as sales-hokum. Without a word he pulled a rule from his pocket and measured the diameter of the lens-glasses, after which he focused the window of the shop on an envelope, and measured the back-focus.

"Inch and a half into six inches goes four times," he muttered to himself. "An F/4 Petzval lens, sure enough, between six- and seven-inch focus, near as I can make out. Why, the blamed thing is nearly six inches long— and heavy! Why,—" He left the sentence unfinished.

The pawn-broker solemnly watched the performance, noted the evident tallying of the lens with specifications, and decided to add two dollars to the price he had intended to ask.

The Youth finished his inspection of the lens by going over it for scratches and dents, and seeing that the rack-and-pinion focusing-

attachment was in working-order. He had studied photography—really studied, not snap-shooting, you know—for over six months of his almost eighteen years, so that the examination he gave the lens was especially thorough. He looked up finally. "How much for this?" he asked directly, thus again betraying his inexperience in hock-shop bargaining.

The pawn-broker saw the desire in the eager eyes, and added a dollar to the mental estimate. "Eight dollars, special to you," he said with affected nonchalance, while keeping his keen eyes fixed on those of the Youth.

Now, at the time of this tale, $3\frac{1}{4} \times 4\frac{1}{4}$ plates were obtainable for twenty cents a dozen, and amateur photographers were wont to object strenuously when the price of hydrokinone and of pyro rose to nine cents an ounce, in ounce-lots. Metol substitutes were unknown. A dollar was a unit of purchasing-power that meant something. It would buy a day's labor, and commanded a certain amount of respect in a grocery-store or haberdashery.

The Youth, therefore, had felt rather affluent upon entering the shop with two dollars and seventy-eight cents crowding his wallet: certainly he had not expected such a casual death-blow to his hopes of owning the lens.

"What!" he gasped, horrified. "Eight dollars? Go on! For that dirty old relic? Not on your life!" Unwittingly he had adopted the correct tactics, which he made more effective than usual by his apparent sincerity. He laid the lens back on the felt-mat with reluctance, and with a muttered "Thanks, anyway," he prepared to leave.

He was only half-way to the door when the pawn-broker, galvanized into sudden action, came running from behind the counter and caught him persuasively by the lapels of his coat, standing before him in such manner that he could further his progress toward the door only by resorting to physical violence. The Youth stopped, tried to back away, stood still.

He caught phrases here and there of the pawn-broker's uninterrupted flow of language, "—please don't go yet—such a fine lens—make us an offer—lens is just what you want—" and felt himself being pushed gently toward the counter whereon lay the lens.

"No!" he exclaimed with some irritation, endeavoring to shake off the detaining hands. "I don't want it, I tell you. Why, it's—it's—" he cast about wildly for something he could say, truthful yet detrimental, "it has no diaphragm—no iris—not even Waterhouse stops—"

"I'll tell you," suggested the pawn-broker with the air of one solving the knottiest kind of



THE PORTRAIT
AUGUST KRUG

a problem. "You make me an offer for this fine lens as is—with a nice leather-cover for it, but no porterhouse diagrams or nothin' like that. You make me an offer." He paused expectantly.

"Dollar and a half," hazarded the Youth desperately, trying to push past and gain the door.

"Oi weh!" cried the pawn-broker, raising his hands and rolling his eyes in well-simulated horror. "A dollar and a half—no, no! Make it two-fifty—you'll take it?" he wheedled.

"Nope: dollar 'n' a half—that's all," and therewith the Youth broke the hold and made for the door with rapid steps.

"Wait—stop! A dollar and a half—it's yours!" hastily conceded the pawn-broker. Irresolutely the Youth teetered on the door-sill; hesitated, and was lost. The pawn-broker escorted him ceremoniously over to the counter, wrapped the lens in newspaper with a flourish, and, receiving his dollar and a half, held the door open as the Youth passed into the Spring sunshine, and slowly threaded his way through the hurrying Bowery throng.

The realization dawned that he was the owner, actually, of an F/4 Petzval portrait-lens, the latest addition to his photographic equipment, which already consisted of a 4 x 5 hand-camera (second-hand: cost, five dollars) fitted with a lens which gave sharp pictures, to be sure, and had enormous depth of focus; but which, as far as speed was concerned, left much to be desired. With his head filled with visions of future attainment in the line of portraiture, the Youth betook himself homeward. For the space of several weeks he kept his spare moments occupied by ineffectual attempts to reconcile a four-inch lens flange and an inch-and-a-half lens-board. Experiments with the front-board removed and the lens fastened in place with adhesive tape, the whole affair being subsequently swathed in focusing-cloths, were next essayed, with results, to say the least, of a very depressing kind. The business of focusing, hitherto so easy, developed unexpected difficulties. Ears had a peculiar tendency to appear as though constructed of a particularly fuzzy variety of cotton when nose and eyes were focused sharply, and there was no friendly iris-diaphragm to turn to in such an emergency.

There were other difficulties, too. For some reason or other, the camera had to be pushed right up close to the sitter when a "large head" was to be made, and somehow, although the exposure was right, and development carried to just the proper lengths, good prints made and nicely mounted, there was always a certain something about the pictures which kept them from being entirely acceptable as portraits of the sit-

ters. The Youth could not explain it or account for it, but the fact remained and was attested by the pictures. The noses all seemed sort of large and the ears small and sometimes missing altogether—a most inexplicable phenomenon.

After the novelty of the possession of an F/4 lens wore off, these unforeseen items, added to the biggest one of all, the difficulty of manipulation, the inconvenience of focusing and then wrapping the camera in the focusing-cloth and tucking it in as carefully as ever baby was cradled, before inserting the plateholder, all rather prejudiced the Youth against the luckless objective. Of course, it did not look, perched proudly on the camera-front, like the lens which had lain for so long in the hock-shop window: it had been cleaned and polished until it shone. Still, he seemed to get better results with the old lens, and results count. He didn't care about making portraits, anyway. It was a thankless job. It was getting to be so that people would not sit for him any more, even when promised half-a-dozen prints or so. Of course, the lens got the blame for all the trouble.

It was, therefore, relieved from active duty, and relegated to an obscure corner of a chiffonier-drawer, there to languish for a period of years, unchanged amid perpetual change. The Youth grew up and passed his majority, waxing wise and skilled in the art of photography: cameras numerous and good did he possess, and of lenses he had a plenteous store. In theory and practice alike did he excel: the years had brought him increased knowledge.

On a certain rainy Saturday afternoon, his customary outing with a camera postponed on account of wet grounds, the Youth, actuated by the great American desire-to-know-how-it-works, decided to dissect a lens. The idle whim of an idle moment was no sooner thought of than acted upon. What more suitable than that the ancient Petzval, having outlived its usefulness, should be offered up for the sacrifice?

Shortly the cells were scattered over the tabletop, and the glasses of the front-combination were being pried apart. Iridescent markings showed as the balsam yielded, and the net result was four pieces of glass and a plenitude of brass-parts and screws.

"Hum!" cogitated the Youth. We'll keep on calling him that. "Nothing very complicated about all this. But then—what can you expect for a dollar and half?"

A good deal of rubbing and a little alcohol finally cleared the hardened balsam from the glass, and the Youth idly fitted the glasses to each other. There were two negative glasses, one a plano-concave, and two of positive sign, one

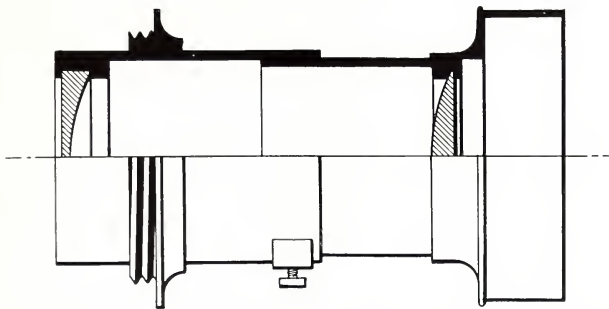
of which was practically plano-convex. Curiously enough, the curvatures of two, one each of positive and negative, appeared to be the same, but complementary of course, so that when the Youth superposed them, behold, the result was no lens at all! One simply neutralised the other, giving in effect a single flat piece of glass a little more than a quarter of an inch thick.

"Very interesting," mused the Youth. "But hold on a minute. A positive and a negative element which neutralise each other—where have I heard of that being done? A negative lens combined with a positive one makes a telephoto

data-sheet. "What'll I have when I've finished, and what'll I do with it?" he asked himself, and prepared pencil and paper to record his answers.

"There has been no attempt at correction of the elements, so that I shall have a soft-focus lens. Of course, I already have a couple of those, but this latest one will not be an ordinary lens, for a reason which gives it two advantages of importance, since none of my other lenses possesses even one of them.

"The lens is a telephoto-lens in principle, and this means, first of all, that the equivalent focus of the lens can be changed at will. Thus, if I



AS THE PETZVAL PORTRAIT-LENS LOOKED AFTER ALTERATIONS (DIAPHRAGM OMITTED, BUT PLACED DIRECTLY BACK OF POSITIVE LENS).

NOTE—REVERSING THE CONCAVE GLASS DECREASES DEFINITION BUT WIDENS THE FIELD OF VIEW

lens—true—but this neutralisation-business—ah! With an air-space between! Eureka! That's the principle of the Dallmeyer-Bergheim, the first lens especially designed to produce softness of focus. The question is, will my combination work? Have I accidentally stumbled upon a Dallmeyer-Bergheim lens?"

He quickly extemporised a lens-mount from a couple of cardboard tubes, and fastened the newly organized soft-focus lens temporarily to a view-camera front-board. A half-hour was then spent in various adjustments of the combinations, some weird effects being obtained on the focusing-screen, and at the end of that time, a perspiring Youth it was who withdrew his head from under the focusing-cloth and remarked, "Whew! I'm warm! But it works!"

The accuracy of his conclusions being thus experimentally verified, the Youth sat down to study his make-shift lens and his hastily penciled

want a nine-inch lens for a four-by-five plate. I can adjust the separation of the glasses to give me this focal length just as readily as I can obtain an eighteen, twenty-four, or fourteen-inch equivalent focus. The wider the glasses are separated, the less the focal length will be. A long-focus gives a compact lens, but a short-focus will extend the combination somewhat.

"To be sure, this proceeding means that although the actual working-aperture remains the same, its nominal or F value changes with each change in focal length. The amount of this change can be figured out readily, though, and a little table compiled for guidance. Another practical limitation to the advantages of theory will be imposed, too, because the diffusion will be too great at full opening with the smaller focal lengths, and nine inches will probably be the shortest I can use.

"The other advantage is also a property of the

telephoto-lens, and is due to the fact that the optical centre of a telephoto-combination is not situated in close proximity to the diaphragm, as is commonly the case, particularly with rapid rectilinears and single lenses; but is situated some distance out in front of the lens, depending on the focal length, of course. This permits the use of a lens of long focal length with a comparatively short bellows-extension. I shall, however, probably adjust my lens and camera so that for ordinary landscape-work I shall be using practically the whole of the bellows, thus getting the benefit of the longest focal length usable on the camera.

"Now, since the curves of both glasses are of rather short radius, diffusion due to spherical aberration will be great. This is desirable for landscapes, because here a fairly good amount of diffusion should be obtainable at a small aperture, let us say $F/16$. This combination of reasonable diffusion with a low stop-value is just the opposite requirement to that of portraiture, each field of work needing a lens best suited to it.

"On the whole, then, I think I have done a fair afternoon's work. When I get a brass-mounting fixed up so that the separation of the glasses can be changed, and get some sort of a diaphragm rigged up, I ought to have a very good landscape-lens."

With that the Youth busied himself and soon had his own model soft-focus lens permanently mounted and in shape for serious work. The old barrel was cut in two, and a new brass-tube was machined to make a sliding fit inside one of the halves. The two glasses were mounted in cells which screwed into the ends of the tubes. The amount of separation required was determined by trial and error, and the positions for each focal length etched on the inner tube. When adjusted, the tubes were held rigidly in place by a thumb-screw. There was some difficulty with the diaphragm, as its position theoretically should have varied with the focal length; but its location was settled arbitrarily, once and for all, with no perceptible effect on the definition.

Then one day the Youth packed up his eight-by-ten, with a staunch tripod, and wandered afield to test the lens. He does not believe in making a multiplicity of exposures, particularly when using his eight-by-ten; but the negatives he obtained that day were very satisfying.

He finished a number of prints, and showed them to the Official Critic at the Club one evening. This awesome individual had on his rubber-apron and was preparing for a developing-orgy, but he stopped in the middle of his mixing and let the sulphite cake as it would while he examined the prints which the Youth handed him for his criticism.

He ran them over hurriedly at first, then more carefully the second time. On the third round he inspected each one minutely, holding it close one instant and farther away the next: squinted through his hand in the orthodox manner, then laid them all out, side by side upon the table.

"Quality-work, my boy," he said appreciatively. "I'm not going to jump on you very hard because of the compositional defects; there are not many and they're easy to get rid of—besides, I know these are just proofprints. They're nice, though; the chemical quality from start to finish is mighty good. But the lens-work is what appeals to me. A quiet soft-focus softness, without excessive fuzziness anywhere in the print, is what I like to see—and you've got it here. I know what lenses you have—I have some of the same—and some day you're going to show me how to get effects like this with them."

"I'll be glad to," said the Youth. "But this is another lens entirely, sir. I'm glad you like the quality, because I was more than eager to make good on this lens."

"New lens, eh?" grumbled the Official Critic, "Well, I suppose I shall have to get one. Nothing like having all the modern improvements."

A little smile showed itself for a moment on the face of the Youth. He was thinking of a tarnished bit of brass and dusty glass, symbol of outworn usefulness, resting in the shadows of three idly swinging golden globes.



Smith vs. Struss

Friend Charley has a Smith-made lens,
While Robert owns a Struss;
And every time they chance to meet,
They fuss and fuss and fuss,

For Charles maintains no other lens
That man has ever made
Can equal that which Smith has ground,
Or cast it in the shade.

While Bob with vehemence contends
The Struss lens has no peer,
And that its work will be excelled
He never needs to fear.

They prate of softness and of depth,
When everything is muzzy,
And say the print has atmosphere,
When it is only fuzzy.

And so they quarrel and they fuss,
From early morn till night;
While each asserts the other's wrong,
And he alone is right.

But one day I took to the club
A print so poor, so awful,
If I'd been hanged for making it,
You would have said 'twas lawful.

So woggly-woozy was the thing,—
Now, really, I'm quite serious.—
One glance at it would make you reel,
From two you'd grow delirious.

When Bob and Charley saw that print,
They both became ecstatic;
With loving looks they lingered long,
Their praises were emphatic.

"Why, that's a peach!" Friend Charles
exclaimed,
In perfect admiration;
"I'll say that it's some pippin, too,"
Was Bob's asseveration.

"I'll bet you made it with a Smith,"
Said Charley then to me;
"He used a Struss," Friend Bob replied,
"As you can plainly see."

Once more the wordy battle raged
Until the setting sun,
When both, all spent, appealed to me
To show them how 'twas done.

"I'll gladly tell you both," said I,
"Since you my secret beg;
Whenever you expose the plate,
Just kick the tripod-leg."

L'Envoi

Six moons have waxed, and six have
waned,
Yon twain wage as of yore
The battle of the Smith and Struss,—
But greet me nevermore.

The Developer.

I Accept the Challenge

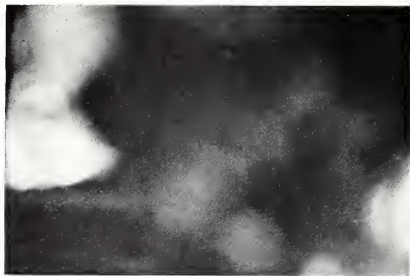
LEHMAN WENDELL



PHOTOGRAPHERS, amateur as well as professional, know that there are two general types of lenses, the convertible and the non-convertible. The convertible lens, as the name implies, is so constructed that its different elements can be used independently. For instance, if we want to photograph a certain view and find that the image is too small with the complete lens, we can unscrew the front element and obtain a much larger image with the rear lens. Some lenses are triple convertible, so that three different focal lengths can be had with the one lens.

point, I illustrated the article with the photograph of a cricket, made with the rear lens only. I also brought out the point that for close-up work it is best to stop down as much as possible.

No sooner had my discovery been made public, than I was challenged. The challenge came from men who evidently understand the theoretical side of lenses better than they understand the practical side; for it was quite evident that they had used their theoretical knowledge only, and had not gone to the trouble to experiment with the rear element of a non-convertible lens to see whether my claims were just or false.



"THUNDER-STORM ON MT. BLANC" LEHMAN WENDELL

Naturally, a convertible lens is very useful at times, as every photographer knows.

A non-convertible lens is so made that it must always be used in its entirety. In that respect, it differs from the convertible. However, some time ago I made the interesting discovery that for very near work it is possible to use the rear element of a non-convertible lens. At least, that is true of my lens, as well as of other non-convertible lenses I have used, though not of all of them. My own lens is a Bausch and Lomb Tessar, Series 1c, F/4.5, 5½-inch focus. My camera is a Revolving-Back Auto Graflex Junior, 2¼ x 3¼ inches. This camera is usually provided with a 6½-inch lens, but I prefer a shorter focal length because it enables me to use every inch of the bellows, a feature which is indispensable when making nature-studies. At the same time, the focal length is sufficient to prevent distortion.

I described my discovery in the July, 1922, issue of PHOTO-ERA MAGAZINE, and, to prove my

The first challenge came from a well-known lens-manufacturer, to whom I had sent a print of my cricket, with proper explanation. The reply was curt, almost brusque, as if to chastise the layman who had the effrontery to tell the lens-manufacturer what his lenses would do. The idea! What do you know about lenses, anyhow? You go hoe in your own garden! That was the tone of the letter. I was told that my discovery was not a discovery at all, and the writer of the letter maintained that the rear lens could not be used. "You say," he wrote, "that you had to stop down to the smallest diaphragm-opening in order to obtain proper definition, and by so doing you really converted your camera into a pinhole-camera. You could have obtained the same result with no lens at all." Thus spoke Theory.

Pardon me, my dear Mr. Theorist. I should have known better. I apologise profusely and forever. I bow in the dust before you and apologise once more. What a saphead I have



Made with Complete Lens



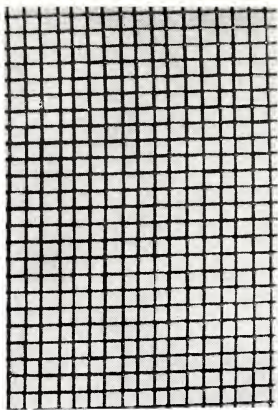
Made with Rear Lens



Made with Rear Lens



LORD HIGH MUSEUM
IMPLEMENTS OF A BACHELOR
LEHMAN WENDELL



Made with Rear Lens

SCREEN

LEHMAN WENDELL

been! What a nunny! I even disgraced myself to the extent of writing an article for PHOTO-ERA MAGAZINE, and when the article finally appears, I discover to my dismay and humiliation that I am describing a discovery which isn't a discovery. I have disgraced myself and PHOTO-ERA, and have belittled the intelligence of its readers. Let me crawl into a gopher-hole and repent.

But while we are looking for the gopher-hole, let me do a little additional experimenting. You say that I have converted my camera into a pinhole-camera and that I could have obtained the same result with no lens at all. That certainly is interesting. Let us try it out, at once. First of all, let us remove the front lens and focus with the rear element on a small object. I find that we can bring the camera as close as six inches from the object. Now, we remove the back lens, place the camera where we had it before, stop way down, and make our exposure. What is the result? A futurist's picture of a thunder-storm on Mont Blanc. Evidently the no-lens combination is fine. Think of the wonderful possibilities that now lie at our feet—or perhaps they sit; I don't know. Now we can take a picture of "A Nude Descending the Stairs" and when we show it to some friend he will exclaim, "Well, I'll be jiggered. Isn't that a dandy picture of a pig in a hog-wallow!" And some other friend will see the same picture and with eyes as big as saucers will say, "For goodness' sake, Wendell,

how did you manage to get that picture of Lenin and the Bolsheviki?" Yes; the no-lens is a good one. I don't care for it, though.

The second challenge came from a professional photographer, a very likable fellow and an unusually clever photographer, but . . . His comment on the cricket-picture was this: "You have photographed a very small object, which means that you have used only the center of your lens. Now, if you were to photograph a large object, requiring the use of the entire lens, you would find that only the center of the negative would be sharp, while the rest would be out of focus in varying degrees."

Queer that I never thought of that! Why do other men always have to tell me the theoretical truths? Why can't I think of them myself? I see more and more that I am a regular bone-head. I, for one, must have descended from the monkeys, William Jennings and all others to the contrary. Along evolutionary lines my progress has been like that of the termite, it has amounted to nothing during the centuries. But, for the very reason that I am related to the anthropoid apes, I am filled with simian curiosity, and I cannot refrain from experimenting again with my camera to see how far astray I have come from the teachings of the theorist. So I make a picture of Lord High Muckamuck, my Chinese incense god, as he sits in meditation beneath the drooping clover-blossoms. I first make a picture of him with the complete lens, for the sake of comparison; then I make another picture of him with the rear lens, the very lens which the theorist says can't be used alone. What is the result? Blurred edges? Go ask the theorist!

The third challenge came from a man who knows cameras from Q to M. (We usually say



Made with Rear Lens

SNAIL

LEHMAN WENDELL

from A to Z, but since I am using a Corona typewriter and like to be logical, I must use the first and last letters as I find them and not as ancient usage gave them to me. Pardon the digression.) This man, as I was saying, knows cameras from Q to M, and, besides that, he is a pictorial photographer of high repute. He also saw my cricket-picture, and after he had hemmed and hawed sufficiently to tear me down from my lofty pedestal, he commented as follows:

"You have photographed an object made up entirely of curved lines. Try your rear lens on straight, parallel lines and see what you get. You will get distortion, and the straight lines will be reproduced as curved lines. And you, of course, know that the performance of a lens which distorts cannot be improved by using smaller stops. The distortion will still remain."

There it goes again! *Sic transit gloria mundi*, as Nero said to his wife when he had eaten too many green olives. What do I know about lenses, anyhow? I am as ignorant as a babe in its mother's arms. When your experts begin to talk about Chromatic Aberration, and Flare Spots, and Distortion, and Curvature of Field, and Coma, all I know is that coma represents a state of insensibility which has struck me flat in

the face. I am simply done for when it comes to the science of optics. Be that as it may, I am not going to give up experimenting with my camera just because I don't happen to know anything about optics. So I take my Graflex and try to prove or disprove the distortion theory. I focus on an ordinary window-screen, stop way down, and make my exposure. What is the result this time? Is the theorist correct? O, yes, I'm quite sure he is. I wouldn't dispute his word for anything. 'Tis true that to me the lines look perfectly straight and parallel, but I am sure that my eyes are different from those of all other human beings. The lines must be curved because the theorist says they are.

And now, ladies and gentlemen, my case rests with the jury—the readers of PHOTO-ERA MAGAZINE. What is your verdict? Am I guilty or not guilty? Do I go to the workhouse for sixty days, or may I continue to perplex the opticians and lens-manufacturers with my silly experiments with my camera and lens?

All negatives made with Eastman's Commercial Ortho Films. Time: $\frac{1}{2}$ to 2 min., depending on time of day. Developed with Azo developer. Prints on glossy Azo. Fly & Snail enlarged on P. M. C. No. 9.

The Eye of Perpetuity

SOME eyes there are that never see

The glory of the sky;

To nature's masterpieces blind,

They pass all beauty by;

While other eyes there are that dwell

In ecstacy and love

On every flower, bird and bush,

The sky and clouds above.

Eyes that see not—hold naught to store

In memory's shrine away

To cherish and recall at will

In some far-distant day.

The eyes that see—in seeing find

That which they may review

With joy that recollection brings

And scenes of youth renew.

SOME eyes there are that never see.

SOME eyes there are that see;

But there's an eye that sees and holds

Beyond all memory.

The lens—all-seeing, crystal clear—

Impresses silvered plates

With forms distinct and beautiful;

Sees and—perpetuates.

WILLIAM LUDLUM

Some Easy Lessons in Composition

WILLIAM S. DAVIS

Part Two

Lesson IV. Leading the Eye into the Picture



HE main point of interest may lie in such a bold mass of tone as to instantly rivet attention; but where this does not happen to be the case, the eye needs to be directed toward the objective point. Means to do this are generally at hand, as the eye will follow without effort a general line or curve, such as is formed

of, rather than into, the picture, it will do more harm by far than the absence of any guiding line. Perhaps, the worst example of a misplaced dominant line which can be cited is a road branching into two diverging forks, seen from such a viewpoint that the latter pass out of the picture upon opposite sides, but it is nearly as bad to have a curving road run out at one side. In either case,



FIGURE 7

WILLIAM S. DAVIS

by the outline of a mass of tone, or the shape of an object which contrasts with its surroundings. Prominent lines formed by such parts, as a road or winding stream starting from the immediate foreground and running toward the distance, afford a graceful means to lead the eye into a landscape composition, an example being given in Figure 7. Other material which will serve the same purpose is a fence or stone-wall, the edge of a shadow, a pattern of shadows in which the lines converge, tracks in snow, and a series of angles running in a general direction, such as formed by parts of an architectural subject presented in perspective.

If an important line is so placed as to run out

the eye follows such line, or lines, not being able to find a spot within the picture to rest upon.

A method entirely different from the one first described, of leading the eye into the composition is that obtained by means of a vista-effect, which is created when nearby objects form a frame or setting for subject-matter beyond. Looking through an open doorway gives a pleasing effect of this kind in the case of an interior, while out of doors overhanging branches of foliage, an opening between trees or the columns of a portico, and the view through an arch, may be mentioned as natural means to produce a vista. Figure 8 is a characteristic specimen of this type of pleasing and interesting composition.



FIGURE 8

WILLIAM S. DAVIS

Lesson V. Distribution of Light and Shade

The size and disposition made of the different spots of light and dark play an important part in the general effect produced.

Gradation of tone in a scene is caused by—1st. The difference in tone and "local color" of individual parts. 2nd. Variation due to the lighting, some portions being brightly illuminated whereas other parts are in shadow. 3rd. The quality of the atmosphere between the eye and parts of the scene at varying distances from the observer, the effect of which is to flatten natural contrast and reduce the strength of dark objects as they recede from the eye. Such an effect, of course, becomes more pronounced and takes place with objects at closer range, when the air is thick with mist or fog.

The fewest gradations are present in an object seen on a dull day when shadows are virtually absent, but in strong sunshine falling upon the subject from one side the largest number of tones are produced, caused not only by changes in light and shade created by uneven surfaces receiving the light in different degrees of strength, but by cast shadows, which must be accounted a part of the composition in every picture.

So far as obtaining good distribution in a picture is concerned, it makes no difference how the light and dark tones are produced—whether by natural gradations in individual parts themselves, by the lighting, use of cast shadows, or reduction in intensity in retiring parts through the action of the atmosphere. The real point is to obtain harmony and avoid the confusion caused by scattering of minute tone-spots of equal intensity over the entire picture in a meaningless manner.

Some subjects seem to possess just the right series of tone-gradations to photograph well under a diffused lighting; but when this does not happen to be the case, the play of light and shadow brought about by sunshine striking the subject at a suitable angle will give variety, and overcome monotony of effect. Naturally, all subjects do not require the same range of gradation, even though it could be brought about; but where a full, rich quality appears characteristic, it can be conveyed in the picture by choosing a time to make the exposure when the subject shows a good amount of deep and middle tones and only a moderate number of lighter ones, the latter serving to accent the rest to better advantage.

Upon the distribution of the tones depends to a great degree the feeling of strength and unity. When broken up into numberless small patches of light and dark alternating with one another, a "pepper-and-salt" effect is obtained which is very unpleasant and confusing. Such as that shown in Figure 9 is quite often noticed in the rendering of woodland or other scenes in which brightly lighted foliage is prominent. It can be overcome by working in a more subdued light, or watching for the effect produced when the sunlight comes from a favorable angle, as is the case in Figure 10, which shows another subject but of similar character as the last. A fully-timed exposure is a help in massing tones, though it will not take the place of suitable lighting.

It is impossible to lay down rules for lighting; but as a general thing a side-lighting gives the fullest scale of gradations between the extremes of light and dark. Light from back of the observer falling full upon a subject reduces the amount of shadow visible and produces a flat result. Facing the source of light increases the area of shadow seen in objects which stand up

against the light, creating the strongest degree of contrast between them and such parts as receive full illumination.

The apparent amount of contrast is always emphasised when a light and dark portion are in juxtaposition, whereas a much softer effect results if these extremes are separated by a series of halftones. As contrasting tones attract more attention than those which merge softly into one another, the judicious use of the former affords a very valuable means to introduce an accent in the right place, such as in or near the principal portion of the composition. The glow of a sunset or other source of light can also be made to appear brighter in the picture by such means. Owing to the attention they attract, the strongest contrasts should not occur close to the margin in a picture, but near the center of attraction.

To sum up: try to avoid scattering of minute spots of light and dark all over the picture; but instead try to obtain a composition based mainly upon a limited number of light and dark spaces. Simplicity of tone-massing makes for strength and directness of expression.

Lesson VI. On Tone-Values and Aërial Perspective

The distribution of light and shade, which formed the subject of the last lesson, leads to the consideration of the range of contrast which a subject presents to the eye.

Between the deepest shadow and the strongest highlight there exist innumerable gradations, each of which occupies its own position in relation to the rest, in the same manner as a musical note is fixed in a scale. For convenience in expressing more clearly the idea, let us suppose the tones from highlight to black were divided into sixteen uniform gradations, each of which were numbered, starting with the lightest. Some subjects might contain all these tones, *i.e.*, the full length of the scale, but most of them would not, for careful inspection will reveal the fact that there is little absolute black in nature, even objects one calls black reflecting some light, and the same may be said of the other end of the scale, the light tones possessing in most cases some gradation. Probably it is safe to say that the average subject does not exhibit more than half or two-thirds of the total range possible in the scale, and many less than this. For example, the lightest tone visible in a given scene might be about number three or four in the scale, and the strongest shadow twelve to fourteen, which would be sufficient to give a rich and brilliant effect. If this range of about eight numbers started with the highest light and extended only

to shadows of medium depth, the subject would be said to be pitched in a light or high key; whereas the same range confined to the darker half of the scale would produce a low-toned effect. A rather flat scene might not embrace more than three or four numbers; but these might lie in any part of the scale.

Now for the application of the foregoing to picture-making. We all know that the difference in contrast between black and white on paper, which represents the absolute limit of contrast in a print, is actually very much less than nature's scale, which is rendered in light itself instead of simply the proportionate amount of light which paper of varying shades can reflect. How, then, is one to suggest the brilliancy of the natural scale when confronted by such an unsurmountable limitation? The answer is, by representing as nearly as circumstances permit, the relative position of the tones of the scene within the limits of black and white on paper. In other words, if the tone-scale on the paper is, in the mind's eye, divided into the same number of gradations as the natural one, any detail corresponding in tone to a given number in the latter scale would be represented properly by a tone of the same number on paper. What has to be done is really to compress the natural scale to keep it within practical limits. It is possible to do this with considerable accuracy when the



FIGURE 9



FIGURE 10

SOME EASY LESSONS IN COMPOSITION
WILLIAM S. DAVIS



FIGURE 11



FIGURE 12

SOME EASY LESSONS IN COMPOSITION

WILLIAM S. DAVIS

subject does not cover too great a portion of the scale, but when an intense spot of light, like the sun or a strong artificial light, is included in the subject-matter, this spot is so much greater in luminosity than any other part that it is impossible to assign it its true place, consequently one can only effect the best compromise by making it the very highest light in the picture, having all other tones sufficiently subdued not to be compared with it. Handled in this way, the brightness of even the sun can at least be suggested in the picture.

The term "tone-values" is commonly used to cover collectively the representation of the gradations of nature in their relative position in a picture, as described above.

The most obvious shortcoming in an underexposed photograph is failure to register tonal gradations properly, shadows being represented by masses of black, while lighter parts run together into blank patches of white paper. This, of course, is not true to facts, since even a deep shadow under normal conditions contains detail, which could not be the case were it absolutely black, whereas such bright highlights as a foaming wave, snow, or a white dress, possess some gradation.

Aërial perspective is the name given to the feeling of separation between near and distant parts due to differences in tonality and color produced by the increased amount of atmosphere through which objects are viewed as they recede

from the eye. The partial opacity of the enveloping air, and the effect of light upon it, causes a gradual flattening of contrast, which is most noticeable in loss of depth of the shadows. This transition takes place most rapidly, and to a greater extent, when the air is thick with mist, but is seen on clear days when distant objects are included in the view.

The flattening of tone brought about by atmospheric action is of great aid to the photographer, for by means of this it is possible to indicate depth or distance, even though linear perspective is absent.

While a hazy atmosphere provides a natural means of showing such an effect, aërial quality can be suggested, and the nearest objects made to stand out in a marked manner, if it is possible to so select the viewpoint, or arrange the material, as to concentrate the stronger contrasts in the nearer parts of the picture, whereas the background is made up of comparatively few tones of nearly uniform value.

Figure 11 shows a strong effect of aërial perspective obtained on a clear day by utilising objects of rather dark tone for the foreground, while the open scene beyond was bathed in bright sunshine. Figure 12 represents aërial quality produced wholly by the state of the atmosphere making the distance flatter and lighter in tonality than the nearest parts, the former actually containing objects quite as dark in local color as any in the foreground.

A Photographic Exposure-Record

HENRY J. SHILER



THE Editor of PHOTO-ERA MAGAZINE recently saw one of the slips on which I keep a record of my exposures and asked me to write something about it, and this I will endeavor to do to the best of my ability. My motive in getting up this slip was more than one. I have read and seen, at various times, suggestions in the various photographic publications, and catalogs of loose-leaf concerns, about sheets or slips intended for the photographer, which no doubt were very good in their way, yet, I am a sort of particular person, and nothing they presented seemed to suit me. So, after looking them all over, I finally succeeded in getting together the following slips.

No doubt different readers of PHOTO-ERA MAGAZINE will criticise it, and that is to be expected. However it suits me to a T, and I hope

that some of my fellow-workers will derive some small benefit or ideas from my description of it.

During my rambles in making pictures, be they for pleasure or profit, I have had the pleasure more times than not to have fellow-workers in the ancient and honorable order slip me sweet little innuendos such as: "Just look at that poor man jotting down the data about the picture that he has just made; his head must be solid ivory that he cannot remember all the data about the picture he just made, at least, till he gets back to the darkroom." There were countless others which space will not permit me to set down in this short article.

To me, there is nothing like striking while the iron is hot, and although my memory is fairly good, yet I have found, especially if one puts off the developing of those particular pictures for a day or two, that the old imp "Doubt" steps

in and plays havoc with one's memory. This is the time especially when the little "Photographic Exposure Data Slip" saves the day.

To give the facts about the above-mentioned slips, it will be necessary to let you have a general idea of my system of filing my negatives, which I will do, and which may be of some benefit. This filing-system consists essentially of four operations which I will herewith enumerate and try to explain.

The first is the Photographic Exposure Data-Slip, illustrated below:

PHOTOGRAPHIC EXPOSURE-DATA

Date..... July 25, 1922..... No.....
 Name..... Mt. Vernon Post Office.....
 Time..... 10.15..... A.M..... P.M.....
 Camera..... Korona View.....
 Size..... 4 x 5..... 5 x 7..... 8 x 10.....
 Lens..... Carl Zeiss Protar 7.1, 6-in.....
 Stop..... F/4.5—5.6—6.3—8—11—16—X22—32—45.....
 Exposure..... 1/10 Sec.....
 Filter..... AK1—K2—K3.....
 Film..... Eastman Com. Ortho.....

This is a 3" x 5" slip of paper, perforated to fit a loose-leaf note-book, and contains two sets of data on each side of the sheet. Here we have all the facts set down at the time the exposure was made. The number in the upper right-hand corner is made at the time of exposure and corresponds to the number which you will find on the holder, and also on the film or plate, which is put on at the time of filling the camera, in the lower left-hand corner.

The next thing in the scheme is a 5" x 7" Manila envelope with data as follows:

Date..... July 25, 1922..... Class..... Architectural..... No..... 139
 Name..... Mt. Vernon Post Office.....
 For Whom Made..... Anderson Realty Corp.
 Where Made..... South 1st. Arc., Mt. Vernon, N.Y.
 Exposure..... 1/10 Second, Carl Zeiss Protar 7.1 6"
 Korona 4 x 5 View 6" K1. W. W. Screen
 Eastman Commercial Ortho P. Film
 Best paper to make prints on..... Leo F. No. 3

This negative-preserver has virtually the same information as on the Data-Slip, with the exception that in the upper right-hand corner there will be found a large number which I have on all my negative-preservers, and which are numbered in numerical sequence, and this same number is put on the bottom of the negative.

CHRONOLOGICAL INDEX OF 4 X 5 FILM-NEGATIVES

1. Mt. Vernon Post Office Mt. Vernon, N.Y. July 25, 1922.
2.
3.

The Chronological Index, described above, is kept in a loose-leaf binder of a size of 8½" x 11", the different sizes of negatives are kept in the same binder on different sheets, each size of negative being noted on the top and bottom of the right-hand side of the sheet with a large caption which I have had made into rubber-stamps such as "4" x 5" Film-Negatives", "4" x 5" Plate-Negatives." There are only fifty entries to each side of a sheet, and by using both sides of the sheet it gives me a capacity of one hundred negatives to a sheet. Right under the caption at top and bottom, I also put in the following as 1-50, 51-100, 101-150, and so on, so that I can readily see at a glance what is on that page.

Lastly I have the 3" x 5" index card, described below. As I use only three sizes of negatives, the sizes of my negatives are governed by the color of the cards, they being yellow for the 4" x 5", white for the 5" x 7", and red for the 8" x 10". They are then filed in my cabinet, first under the subject, second under the town or city and third under date, so one can see readily that the subject virtually governs the place where the card is likely to be found.

ARCHITECTURAL Mt. Vernon, N.Y. 139
 Mt. Vernon Post-Office
 So. 1st Arc.
 Made for Anderson Realty Corp., July 25, 1922

Of course, if time and trouble are of no account, one might go one step farther in doing away with the 3" x 5" index-card and substituting a card of the largest size of picture that one makes, using the same colors, as described above; or, for that matter, using a color which suits the present fancy, and putting on the face the same data as on the small card, and on the back thereon mounting a print of that particular picture with the dry-mounting process and then one would have a practical, complete record. Yet, I find that my method described above suits me, and I hope that the reader may gain some little information.

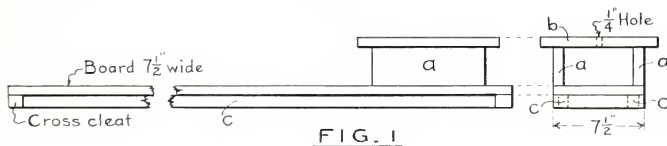


A Simple Enlarging- and Copying-Easel

A. D. DUBOIS

IT is a simple matter to construct a satisfactory enlarging-easel with the necessary run-way or guide-board to keep the enlarging-paper always at right-angles to the axis of the camera. The outfit here described was constructed in a homestead-shack in Montana, where it was used very successfully as a daylight-enlarger. A Premo plate-camera (4 x 5) of an old model with long bellows was used as the enlarging-camera. A suitable frame, made of pine, was rigged up, to hold an ordinary plate-holder against the camera-back, where the groundglass frame had been removed. An old Premo plateholder served as the negative-carrier, the only alteration necessary being to cut a rectangular opening in the dividing septum of pressboard, somewhat smaller than the negative to be held. The negative-carrier was held

wider than necessary, but the additional width adds stiffness. If the board is not stiff enough to remain perfectly straight when in use, it must be stiffened by longitudinal strips (c, c) screwed edgewise on the under side. About $3\frac{3}{4} \times 1\frac{1}{4}$ inches should be ample dimensions for these strips. I found the board stiff enough for temporary service without reinforcement. At one end of the guide-board (Figure 1) a pedestal or base, to support the camera, is required. The height and length of this will depend upon the size of camera used and the maximum dimensions of enlargements to be made. It consists of two side-boards (a, a) supporting a top board or platform (b), in which a hole is drilled to accommodate the tripod-screw. In any case, the height must be sufficient to admit the hand for inserting and turning the tripod-screw which holds the camera in place.



between the camera-back and the holding-frame, above mentioned, by means of two rubber-bands. The holding-frame fitted into an opening in a light-tight, black cloth, to which it was attached, and which served to shut out all extraneous light from the small north window of the darkroom. When in use, the entire outfit was tilted up toward the sky until the horizontal line was out of the field of the lens. In the city, where buildings interfere, a white paper reflector, placed at about forty-five degrees outside the window, would be necessary to reflect diffused light from the sky above.

The accompanying drawings show the dimensions adopted by the writer for the easel and guide-board. These proportions were such as to serve the purpose very well; but, of course, are merely offered as a suggestion. The most satisfactory material is white pine. It is light in weight, easy to work; and, if well seasoned, it will not warp. My material was clear, white pine about $\frac{3}{4}$ -inch thick, obtained from the lumberyard, surfaced both sides. The guide-board when finished was about five and a half feet long and seven and a half inches wide. (See Figure 1.) This is

The "easel" proper is shown in Figure 2. It is made to slide on the guide-board, and consists essentially of a vertical easel-board (d) secured at right angles to a horizontal base board (c) and held by two triangular blocks or braces (f, f). On the bottom of the base-board (c) two guide-rails (g, g) are secured with wood-screws, the distance between these guides being such that the easel will just slide easily throughout the length of the guide-board or run-way of Figure 1. If deemed desirable, to hold the shidable easel-structure down to the guide-board, two strips may be added below (g, g); one of these is suggested in dotted lines at (m). These may be omitted without introducing any serious difficulty in using the easel.

A clamp is necessary to prevent the easel from slipping, after the image has been focused. This may be constructed easily as follows: Provide a strip of stiff sheet metal (about 1.32 inch thick), cut to the shape shown in Figure 3. Spring brass is by no means necessary. I used an old worn-out sheet-steel stove-shovel, the kind that feeds the kitchen-stove, and with a pair of snips cut from it a piece of the proper

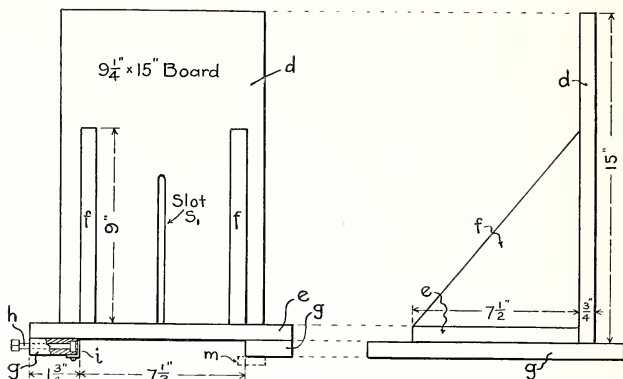


FIG. 2

shape and size. Drill a hole in the lug, as shown, and bend the lug, on the dotted line, at right angles to the main strip. By means of a small wood-screw, through the hole in the lug, fasten this metal plate to one of the guide-blocks (g), as shown at (i) in Figure 2. A recess in the inner face of the guide-block (g) must be cut to accommodate the metal plate—the depth of the recess being very slightly more than the thickness of the metal. Before mounting the metal plate, chisel out a square hole of the proper depth and size to hold the square nut of a bolt (h) and to keep the nut from turning. At the centre of this, a hole of such size as to make an easy turning fit for the bolt (h) is drilled through the guide-block (g). The end of the bolt should press against the metal clamping-plate at a point near the middle of the plate or somewhat nearer the free end. Thus an effective clamp is provided; for, when the head of the bolt (h) is turned with the fingers, its square nut, imbedded in the wooden guide, propels the bolt forward against the metal plate which is thereby pressed tightly against the edge

of the guide-board upon which the easel slides. The amateur will exercise his own ingenuity in providing a thumb-piece on the head of the bolt if such a luxury is desired. If the head is slotted, a small rectangle of sheet-brass may be soldered into it. A square-headed bolt will serve very well as it is without a thumb-piece.

The adjustable shelf, or printing-frame support, is the feature which makes this outfit most convenient in use. It consists of a slotted piece of wood with a lug, or end-stop (k), at one end as shown in Figure 4. A quarter-inch bolt, with a wing-nut, or a knurled thumb-nut, is to be provided for clamping this shelf-piece to the easel-board, which latter has a vertical slot (s) for the purpose. The bolt has a square shank (an ordinary carriage-bolt) which slips easily in the slot (s) but will not turn in it. The bolt is slipped through the slot in the easel-board from behind, with a large washer under its head to supply a bearing surface against the wood. On the front of the easel-board the shelf-piece is put in place by slipping its slot (s₂) over the projecting bolt. Another washer is now put on and the thumb-nut

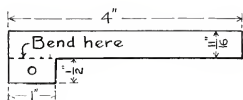


FIG. 3

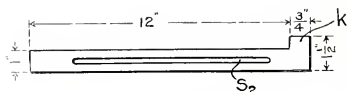


FIG. 4

screwed in place. The lug on the shelf-piece is uppermost, and serves as a stop against which the printing-frame is to be placed.

For focusing, a sheet of plain white paper is inserted in an ordinary printing-frame, without glass, and the printing-frame is rested on the shelf-piece, with the back of the frame against the easel-board. The image is then focused on the paper in the printing-frame, and the shelf-piece is adjusted as to height, angle and lateral location so as to bring the printing-frame into exact register with the picture desired. The thumb-nut is then tightened to hold the shelf-piece securely in place. To make a print, the sensitive paper is placed in the printing-frame (without glass) and the frame is placed on the shelf-piece and slid over against the stop (k). This ensures proper registration of the image as focused. This method of using a printing-frame for the paper-holder is a decided convenience and time-saver, especially for the smaller sizes, such as 5×7 , $6\frac{1}{2} \times 8\frac{1}{2}$ or 8×10 . For larger sizes a small drawing-board may be substituted for the printing-frame and the paper will then be held to the drawing-board by thumb-tacks or push-pins, two adjacent edges of the paper being placed in register with lines drawn on the board for the purpose.

If a white margin is desired on the prints, the printing-frame is very convenient to produce it. If no printing-frame of the desired size is at hand, a heavy earlboard-mask should be cut

out, with a rectangular opening the size of the picture. On the back of this mask, strips of tough paper are pasted diagonally across the corners in such manner that the corners of the bromide paper can be slipped under them, thus holding the bromide paper in position on the stiff mask. The mask is then placed on the shelf-piece in the same manner as a printing-frame; but it will have to be pinned to the easel-board with push-pins to hold it in place.

When necessary to correct, in the print, distortion in the form of converging lines toward the tops of buildings—a fault common in negatives made without the use of the swingback—the correction can be made by means of the swingback on the camera used for enlarging. Or, if this camera has no swingback, the easel can be tilted forward, as the ease may require, in order to correct slight distortion.

A home-made equipment of the kind described is exceedingly useful for copying as well as for enlarging. For this work the camera is mounted in the same way on the box-pedestal, and the document, print or drawing to be copied is pinned on the easel board. The size of the copy is determined by sliding the easel backward or forward, and the image is focused in the usual manner on the ground-glass of the camera. The use of the easel and guide-board ensures, at all times, the desired parallel relationship between the easel-board and the plate in the camera, a thing that must not be overlooked in copying.

Glue-Printing—A New Positive Process



PROF. O. MENTE writes in the *Photographische Rundschau* that he had given the Kühn "Glue-Print" an extended trial and found that the statements of its inventor were not only confirmed in all important points, but this new positive printing-process for many purposes cannot be substituted. It may be stated that the leading thought of glue-printing—printing a chromated colloid pigment coating from the back (uncoated) side of the paper—is an old one, since it was practised in 1858 by J. C. Burnett and others; but it found no general acceptance, probably for the reason that unsuitable material was used and that the technical skill for its successful use was lacking.

The fundamentals of glue-printing consist of the following: a good, rather smooth paper, uniformly coated with a warm mixture of glue, colorant and chrome salt, dried, then made transparent by applying a suitable material to the un-

coated side, then printing from the negative on that side; after softening the coating in warm water it is developed by a spray of water. That is the principle of the old pigment-process, but using glue instead of gelatine as vehicle for the color, and paper as support for the color instead of celluloid, but printed from the back of the paper. The inventor would use the process for large prints only, but negatives from $3\frac{1}{4} \times 4\frac{1}{4}$ up have been successfully used; however its character is better suited for the larger sizes.

To avoid taking too long a time in printing, negatives with clear shadows must be used; at the same time the lights must have sufficient covering, because if too rich a pigment or too little glue is used the glue-print will have poor-toned lights. Preferably, negatives should be used that will give a strong, almost dark print, and those of subjects bathed in sunlight or in fog should not be attempted. Since the printing must be done from the back, where reversing

the sides is important, a reversed negative must be used. Of course, with films and paper-negatives, it is only necessary to reverse them.

In selecting a paper, all of an uneven or spotty grain must be rejected. It must be thin on account of printing through it, and tough enough to withstand the often lengthy spraying in developing and soaking in warm water. A good calendered and uniformly-sized writing or water-color-paper can be used without further preparation. It is also important that it bear oiling well, and always be tested beforehand by rubbing with paraffine oil or vaseline to see whether it becomes transparent and that no spots show in it. To ascertain if the paper is sufficiently coated with glue, a cross is made with pen and ink on the coated surface, and if the ink runs at the point of crossing there is too little glue and the paper can be given another coat. Technical mistakes cannot be remedied at any point, and care is necessary from the beginning to obtain good results with this process.

To carry the color, ordinary cabinet-maker's glue is used. Prepared liquid glue should be avoided as it often contains foreign substances which impair its action. If the glue is in thick cakes, it must be broken into small pieces and covered with water in a pail or other vessel where it is left to soak for about twenty-four hours. In that time it will have taken up its fill of water and any remaining is poured off. The glue should never be melted directly over the fire; but only in a proper double glue-pot and should not be made too hot. When melted the glue should form a thin liquid without lumps or clots and should not harden too quickly. The bichromate is now added, which consists of a cold saturated solution of ammonium bichromate which keeps well. One part of this is added to three parts of the glue; if the glue is very thin four parts may be taken to one of bichromate.

With regard to the quantity of pigment, which is added last, this must be determined by trial. Burnt sienna, Paris blue, English red and animal or lamp-black are the dry colors preferred. The color must be finely ground, have good covering-power and be very thoroughly mixed with the glue. The mixture is then applied to the paper slowly and carefully, covering it uniformly; but it should show a little light on looking through it; the coating should not be so thick that it will crack on drying; but all parts must have sufficient coloring. The paper is fastened to a board or thick cardboard by thumb-tacks and the glue applied with a broad brush. The drying should be as rapid as possible in a dark-room and may be assisted by a ventilator and

warm air. When dry, the coating should show a slight gloss which is the best proof that there is sufficient glue in the mixture. Dark, dull coatings, *i.e.*, that contain too little glue and too much coloring-matter, will not give clear lights in the finished picture. When the paper is "bone-dry" it is laid coated side down on a glass-plate or cardboard and rubbed repeatedly with a wad of cotton dipped in vaseline or paraffine-oil until it is uniformly transparent. If the oil has not thoroughly penetrated the paper it must be allowed to stand for a time and again oiled until it is perfectly transparent. The superfluous oil is then wiped off and the sheet placed with the oiled side next the negative in the printing-frame and so printed through the back. Although it is possible to a certain extent to control the printing by watching the print, it is recommended to always use a photometer for timing. Over-printing can only occur when it is greatly extended and this can generally be remedied by prolonged washing. The length of time required for printing through the back is naturally much greater than when this is done on the front and depends largely upon the thickness and transparency of the paper.

Developing proceeds much the same as with pigment-paper without transfer; but is not subject to the nerve-racking "tearing-out" of the highlights. When removed from the printing-frame the print is laid in a tray of lukewarm water which is frequently changed. Part of the color is thus washed off and the picture will gradually appear and development with cold or lukewarm water follows, using a sprayer. It is best to begin with cold water and a low pressure and only when the shadow details do not come out readily and the highlights hold the color, lukewarm water may be used and more pressure.

It is to be noted that the print becomes darker when dry; consequently it should be developed till a little lighter than the tone desired. If traces of chrome-salt remain in the fully developed print, they may be easily removed with a dilute sulphite or alum bath, washing well afterwards. An excess of oil in the paper may also be removed by the use of benzine or ether.



IN a fine picture, the subject holds first place in the attention of the observer; nothing is allowed to call or pull the attention away from that subject. When a freak contour, a curious detail, an obtrusive technique, or a vain autograph, obtrudes itself, the attention is divided, the subject is robbed and forced to take second place.—HENRY TURNER BAILEY.

A Help to Amateur Pictorialists

F. BIRBECK FARMER



FURING every season of the year most of us are thinking of improving our equipment so as to get the best we can out of our cameras. I am writing this short article for the serious worker, the real amateur.

As we all know, a long-focus lens is very desir-

an excellent R. R. lens of $6\frac{1}{4}$ -inch focus; but I desired to have a lens of about $8\frac{1}{2}$ -inch focus. Having access to an optician's lens-case, I began to experiment to find a lens that would increase the focal length of my $6\frac{1}{4}$ -inch lens and I found that a spherical concave minus lens was just what was needed. In trying one after the other



FIGURE 1

F. BIRBECK FARMER

able in pictorial work; but few of us find our pocketbooks able to meet the cost of a new lens amounting to about \$20.00. Consequently, I am going to tell those who are interested in this work, how they can equip their cameras with a long-focus lens and one that will do very excellent work for the modest sum of \$1.25. After having used this lens for both portraits and landscape, I can safely say that it is sure to give satisfaction to the camerist.

I am using a 4 x 5 Korona plate-camera, with

in front of my own lens, I found one that was right for what I wanted to do with it.

Now my advice to amateur pictorialists is to go to your optician and ask him to order for you a spherical concave lens No. 1.50 (which means one minus a half). Remember that it must be a minus lens. Before doing this, make a cap to fit your lens-barrel, of cardboard, or, if you care to do as I have, procure an old electric fuse and take off the brass-cap which has an opening of about 13 16 inch. With the brass-



FIGURE 2

F. BIRBECK FARMER

cap off, the old fuse I use just fits my lens-mount. Now take the inside diameter of this cap and have the optician order your spherical concave minus lens to be ground a trifle smaller than the diameter of the cap. Next, mount your new lens in the cap with LePage glue or any good glue with the convex side of the lens outward.

Now I have a lens-equipment on my 4 x 5 camera which gives me three focal lengths, namely: $6\frac{1}{4}$ -inch with the original lens using both combinations, $8\frac{1}{2}$ -inch with the new attachment in front of lens and 11-inch using rear combination of lens only. I am now able to take care of almost any kind of work. Of course, the suggestions apply only to users of focusing-cameras, as the attachment could hardly be used unless one has the groundglass upon which to focus, as the usual scale would be of no use with your new lens.

With regard to exposure with the new attachment, if you are using stop F/11, regard it as stop F/16 and give exposure for that stop, and do the same way with other stops in due order.

The two accompanying pictures are not of pictorial interest, but are to show the difference in size of picture. No. 1 was made with the $6\frac{1}{4}$ -inch lens and No. 2 was made with the attachment as described. Both were made from exactly the same point of view. I hope that this article may be of some use to my brother amateurs who are striving to make real pictures.



IT IS the short focus of the kinematograph lens which makes for the superb photography of the films. For with short-focus lenses it is possible to obtain a great depth of focus, by which is meant that in the average scene every object is clearly delineated, from the foreground to the background. In many amateur snapshots the results are disappointing because part of the subject is sharp or in focus, while another part, either up front or toward the back, is fuzzy. That condition is known as lack of depth of focus.

AUSTIN C. LESCARBOURA.

How to Make Advertising Sell Photographs



GREAT many people make the mistake of looking upon advertising as a commodity. If you have an idea that it may be a good thing to buy so many dollars' worth of advertising, as a commodity, you are very likely to waste your money. Advertising is in reality a means of communication. And if treated as a means of communication you will use it only when you have something to say. You wouldn't think of going to the telephone every evening, calling a number of people and saying, merely, "John Smith, the photographer in your town, 108 Main Street." Neither should you do such a thing in an advertisement.

Advertising is the cheapest possible means of communication and the most profitable means of communication if it does the five things you should attempt to make it do.

1. It should attract attention.
2. Be read.
3. Create a desire for the thing advertised.
4. Stimulate action to buy.
5. Locate the advertiser or thing advertised.

If you will keep these five things in mind every time you write an advertisement, you will be more likely to write advertisements that produce the desired results. If you can't write such advertisements yourself, then get some one who can.

To meet the first requirement your advertisement must be attractive. It must not be lost among the great number of other advertisements that appear in the newspapers. To make it attractive you must not crowd the space with text-matter or fancy, distracting borders. A good illustration will often attract attention. To cause your advertisement to be read, what you say must be short and snappy and the first line should be of enough interest to cause the remainder of the text to be read.

People read to be interested or entertained or informed. And above all things people are interested in themselves. They don't care a straw about you or your studio or your ability as a photographer unless you can show them how photographs of themselves will give them pleasure and answer some useful and satisfying purpose. So write your advertising communication with the idea of interesting the reader from the very start then he will continue to read until your message has reached him.

If the first sentence or paragraph of your advertisements tells of your ability as a photographer, it is uninteresting. If it tells of the wonderful quality of the photographs produced

by your studio, again it fails to create interest. But if it says: "Photographs of the children never grow up. Your children will smile out of their pictures at you through all of the years to come. You want them to grow up, to be sure, but why not also keep them as they are to-day—in photographs." Every word in that paragraph will interest the mother or father who reads it. It will also create a desire for photographs. All that is needed is a suggestion to make an appointment or to see the examples of children's portraits in your display-case or to call at your studio. And, of course, the studio location is also important.

Anything indicating service, comfort, convenience or the ease with which photographs are made by modern methods also has its value in stimulating the reader to action and influencing actual sales. When the stipulations we have mentioned have been complied with, an advertisement becomes what it should be—a communication to prospective customers. It is creative, it does not seek to destroy another's business or even to divert it. It is the kind of advertising that builds up business by creating a more favorable sentiment towards photography, which is the most sound and sensible means of increasing any business.

As to its cheapness—ask the advertising-manager of your local paper what it will cost you to use the space you need for printing your communication in his paper. Divide the cost by the number of subscribers (*bona fide*) to his paper and you will find that you can deliver your message in this way cheaper than it would be possible even to print form-letters, to say nothing of the expense of mailing them. Then, too, newspapers are read, and if your advertising is made attractive, it will also be read, while form-letters more often go into the waste-basket.

Personal letters, typewritten and mailed in sealed envelopes, are possibly the best forms of advertising-communications, but we have not mentioned these as they come in a class by themselves. They should be used as much as possible and must be carefully written, but the expense prevents their wide use.

Get away from the idea that advertising is a commodity—keep close to the idea of the advertising communication—carefully prepare every advertisement with the prospective reader and customer in mind—weigh the effect of every word, from the disinterested reader's point of view and you will become, in time, a successful advertiser.—*Studio Light*.

The Amateur Copyist

BERTHA SCOTT

THE average amateur does not think that, at a small expense and with only his usual equipment, he can easily do acceptable work in copying. Even if he wants to reproduce nothing but the cherished photographs in his own family, he will be more than repaid for his efforts. And, as it happens, the effort is no more than that required to photograph an ordinary interior.

pictures which had to be photographed under glass, as well as daguerreotypes and ambrotypes, needed more careful lighting, owing to reflections. But by the simple expedient of testing that, with my eye at the level of the camera, I avoided that pitfall fairly well. By raising all three shades of the bay-window, but leaving the white draperies for diffusion, I obtained a strong, flat light, and set to work copying the old pictures.



COPY OF COLORED PRINT

BERTHA SCOTT

Although I am now doing at least semi-professional work in that line, I marvel at some of the results of my first attempts, obtained by setting my hand-camera on the dining-room table, and incidentally, without having read a single article on copying. The camera, a portrait-attachment, a roll of film, and some books to prop the prints completed the outfit—an arrangement I should not scorn even now, granted I wanted a copy badly, and other apparatus was not available.

Common sense pointed out the fact that the

The first mistake was apparent the moment that the negatives began to develop. Only the photographs that had been placed in a vertical line, *exactly* parallel with the lens-board, were the right shape, and those which had deviated from the parallel line had a slightly distorted look which altered the expression. That, of course, could have been avoided, with forethought; but, even with care, the worker may err a bit in calculating the perpendicular line of the print with the support on which it rests.



COPY OF DAGUERRETYPE



BERTHA SCOTT



COPY OF DAGUERRETYPE



COPY OF PHOTOGRAPH BERTHA SCOTT

So much for light and placing. Exposure was largely guesswork; but I knew that a small stop and long exposure made for greater sharpness—very essential in small negatives meant for enlargement—so I stopped the lens at the smallest opening, and exposed from two to five minutes, depending largely on the shade of the prints. Naturally, even after much experience in copying, no rules can be given, since distance, light, stop and color of the print are all factors. In the five-by-seven view-camera I now use for copying, I stop the lens to only $F/32$, and with correct exposure and full development, I sometimes get negatives that it would seem impossible to surpass no matter how much one tried.

Fortunately, I used a pyro tank-developer, therefore, getting a yellow tinge which made a stronger negative. In the case of contact prints, a thin negative is sometimes as satisfactory as any other; but in the case of enlargements, even with contrasty paper, the result is frequently flat and lifeless. So it would seem wise for the beginner, in this work as in other exposures, to follow the advice of overexposure as opposed to underexposure—likewise, overdevelopment as opposed to underdevelopment.

At the time the roll-film was the only thing within my knowledge, although I am now well

aware that the best results are obtained by the use of the Commercial film, which comes in the heavy sheets similar to the Portrait film, and which can be used in any camera having a back for plates or film-pack. If these films do not come in the size of one's camera, they can be cut easily to the required size. For small copies, as well as for trial, I use just half the five-by-seven sheet.

Of course, if the amateur wants to be ambitious all at once, and copy not only black-and-white but colored prints and objects, he can get the Panchromatic film. With this and an ordinary yellow filter, he can photograph oil-paintings, or any other subject in which blues, reds and yellows will appear in pleasing gradations of color, rather than all white or all black.

Naturally, even with the portrait-attachment, the negative copies of small prints will seem disappointingly small. (By the way, if you haven't a portrait-attachment, don't be frightened by the professional sound of it—it is a very simple and very reasonable accessory.) But smallness is nothing, if definition be there. Get out your little old Brownie enlarger, or any other kind you happen to have, and make your own prints—or go to the nearest photo-finishing store and have larger prints made.

These days, I make my enlargements, usually, with an electric apparatus, because of speed as well as no bother about clear or cloudy weather; but I wouldn't sell my Brownie enlarger for what I gave for it six years or more ago. When I do



ENLARGEMENT FROM VEST-POCKET
NEGATIVE BERTHA SCOTT

not want to work in a room dark enough for bromide paper. I fill my Brownie box with Azo, or perhaps Artura paper, draw the deep buff shade in the bathroom, and presto. I can easily have a print large enough for publication. I willingly admit that the photographs I have had published in many of the highest grade magazines in the country—magazines specialising in the beauty and excellence of their photographic illustrations—have been made in most cases with no more complicated apparatus than a roll-film camera and a Brownie enlarger. The best negative I possess was made with a folding No. 2 Brownie camera, though ordinarily I use 3A.

The lens-booklets frequently proclaim the fact

that "it's all in the lens". There is much in the lens—but there is a vast deal more in the way you use it. I do not deny that an expert in copying can make prints that are far superior to those made with simple apparatus; but I repeat that the average amateur, with the apparatus described, can obtain wonderfully pleasing results. Try, for example, a copy of an old-fashioned photograph of any kind, finish the print on Carbon Black Artura in buff tones, and frame (tinted delicately, perhaps, if you know how) in a very dull, gold frame of antique design, and see if every cousin you have doesn't clamor for a copy of Grandmother in her pantalettes, and Grandfather with his gold cane.

A Gas-Heater for the Darkroom

L. M. HAINER



ANY amateur who does his developing in a closet or unused room has wished that it might be heated; but the ordinary gas-stove usually gives out too much light and, besides, there is the cost to consider. For a few cents and a little work he can have a stove that will keep him comfortable and be safe.

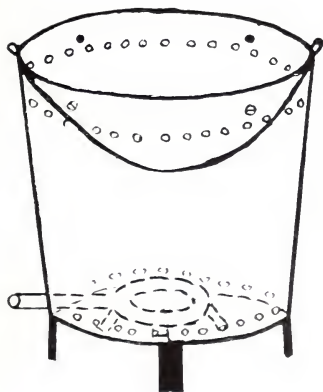
Obtain an eight-quart galvanized pail; a twenty-five cent gas-plate; four two-inch angle-irons, eight

one-inch and four 1½-inch round head stove-bolts; and a tin pot-cover, an inch smaller than the top of the pail. For tools a large nail, a screw-driver and a hammer will be sufficient.

Set the gas-plate inside the pail and mark where the hose-nozzle touches the side. With a nail or sharp punch, punch a circle large enough to let the nozzle come through, cutting from hole to hole with the screw-driver and hammer. Turn the pail upside down and fasten on the angle-irons for legs, punching the holes with the nail. Put the one-inch bolts through from the outside and screw up tight. An inch from the top of the pail, punch four holes opposite each other and put through these from the outside, the 1½-inch bolts and screw up tight. These support the pot-cover which forms the top of the heater, and is a little smaller to allow a circulation of air.

Around the sides of the pail punch a row of holes half an inch apart and an inch from the bottom. Punch another row of holes two inches from the top. Turn the pail over and punch the bottom full of holes. Set the stove on its legs, place the burner inside with nozzle projecting through the hole made for it, connect the hose and light the burner. Put on the cover and you have a safe heater which will keep your darkroom comfortable.

This gas-heater will undoubtedly warm a small darkroom, but as it consumes the oxygen from the air, it should be used only for short periods at a time in the small darkroom. Also the place should be well ventilated afterwards, to prevent any ill effects to the worker from lack of oxygen to breathe.—EDITOR.]



PLAN OF GAS-HEATER



MAKING CHARCOAL

DR. ADOLF EYERMANN



EDITORIAL



Learning Photography

THE question is frequently asked how a practical knowledge of photography can be acquired—whether by attending a school of instruction, by correspondence or in a professional's studio. The question would be a fair one were it not for the fact that in most cases the inquirers do not appear to appreciate the difficulties encountered in portraiture. They think that a good working-knowledge of this, the most difficult branch of the art, can be acquired in a few months' time, in view of some experience—with a small equipment—they have had in general outdoor work.

As a matter of fact, however, they are virtually ignorant of serious photographic practise and, being told what that really means, they either abandon the idea of becoming portrait-photographers, or start on a course of study under a competent instructor, unless they enter the service of a studio-proprietor in an honest effort to gain genuine proficiency. If the ambitious individual prefers, and his circumstances permit, he can attend with profit any of the photographic schools advertised in this magazine. He should ascertain what they have to offer, the cost of tuition and of living, and then make his decision. First, however, he should determine whether he prefers a commercial career to an artistic one. If he is absolutely ignorant of photographic practise, it might be well for him to wait and acquire the fundamentals as an amateur worker, join a camera club and devote himself assiduously to the task of learning as much as possible in a given time. It is amazing how much a serious-minded student can learn if he applies himself in the right way.

Then, there are opportunities—golden ones, too—which must be sought. They will be found, for they really exist. A person who is observant, persevering and resourceful can achieve wonders. On this page, a number of years ago, appeared the story of an immigrant, who had no money, no friends, no experience and no knowledge of English. He sought and obtained employment in the studio of a second-rate photographer, in a large Eastern city. His wages, at the beginning, were a mere pittance, but were increased, gradually, as he progressed

and proved his worth. He was satisfied to do errands, sweep the floors, build fires, and unpack photo-supplies. It was not long before he was trusted to wash negatives, stack them up to dry, fill plateholders, prepare the fixing-bath and help in the printing-room. During all this time, he kept his eyes and ears wide open. Sometimes, he would observe, unseen, how the proprietor arranged and lighted the sitter or manipulated the camera. At other times, he noted how plates were developed and fixed, and, with the consent of the retoucher, how negatives were improved. Being truly ambitious, he obtained permission to use the studio on Sundays and holidays to make experimental sittings of his friends and to use the darkroom. Soon, he gained sufficient proficiency to be of real assistance in the studio, in the darkroom and in the printing-room. Six months after he did the first errand, he bought an interest in the business, for he had saved enough from his meager salary to do this. About one year later he bought out his employer, and within a few years from that time he became one of the leading portraitists in the city. For the past twenty years he has been recognised as one of the six master-photographers in America. Now, what he did is remarkable, but not impossible for others, equally earnest and persevering, to imitate.

A sympathetic and far-sighted studio-proprietor conducting a successful business is not apt to turn away a promising applicant for employment, however humble, even though he be without experience. As to a chance for a novice to assist in the studio proper—where the sittings are made—this is not feasible, as the photographer does not like the sensation that some one, seen or unseen, is studying his operations, even with the intention of profiting thereby, unless it be his regular camera-assistant, who, very likely, worked in an unimportant capacity when he was first employed. The receptionist has exceptional opportunities to familiarize herself with the requirements of the business, provided she is ambitious to become a studio-proprietor.

Of course, amateur photographers who have achieved success in genre-work and at-home portraiture, and possess the necessary business-qualifications, are well prepared to enter the professional field.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition
Wolfeboro, New Hampshire, U.S.A.



Prizes

First Prize: Value \$10.00.
Second Prize: Value \$5.00.
Third Prize: Value \$3.00.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface and sepias are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. **Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins; but in every case, prints should be protected by strong, stiff boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Advanced Competition—Summer-Sports

Closed August 31, 1922

First Prize: Dr. J. B. Pardoe.
Second Prize: R. M. Weller.
Third Prize: Alec Blackie.

Honorable Mention: Franklin Chapman, Cornelia Clarke, Charles Clayton, Jr., J. H. Field, Charles T. Graves, Harold Gray, W. Percy Hardy, Dr. K. Koike, Bernard R. Kretschmar, Warren R. Laity, F. W. G. Moebus, Alexander Murray, Charles Prilik, Herbert Rodeck, L. F. Rodrigues, G. L. Rohdenburg, H. B. Rudolph, Edgar S. Smith, Kenneth D. Smith, C. H. Thomas.

Subjects for Competition—1922

"Parks." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.

Subjects for Competition—1923

"Home-Portraits." Closes January 31.
"Miscellaneous." Closes February 28.
"Child-Studies." Closes March 31.
"Artistic Interiors." Closes April 30.
"Bridges." Closes May 31.
"Marines." Closes June 30.
"Landscapes with Figures." Closes July 31.
"Summer-Sports." Closes August 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Should Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, are inclined to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know?



"OH, CUT IT OUT!"

DR. J. B. PARDOE

FIRST PRIZE — SUMMER-SPORTS

Artistic Picture-framing

AFTER a picture is made, if it is worth keeping at all, it is also well worth a neat frame to hold and preserve it. Kodak views and many other fine prints are beginning to find a place on the walls of homes, where old paintings once predominated. The subject of interior decorating is very closely allied with the adornment of walls, that is, the things which shall go on the walls of a room to make everything in that room correspond and blend harmoniously, and not leave one single jarring note, as you may have noticed in some houses into which you have gone. How often has my artistic sense been jarred in some so-called fine homes by the motley array of pictures displayed in frames altogether incongruous with the background of the room, and

reposing in frames which were altogether unsuited. The frame should be a part of the picture. The newly painted frames are an example, such as a marine view where the blue is carried out in the frame, the whole forming a lasting impression and making a correct setting. Notice how Wallace Nutting places a simple black molding around his beautiful little bits of nature-scenes. He has found the secret of framing and used it to advantage. You can do the same thing. The small picture undoubtedly needs a narrow frame, but this is not always so. A picture having a deep, strong set of colors, as a rule, needs a stronger frame than a picture of less strong tints. The subject of the picture has something to do with the framing. A study of frames in an art-store will bring one closer to the realization of the great importance of frames for various kinds

of pictures. Circassian walnut is admirably adapted to sepia pictures, also the gold-swing frames now found on sale everywhere.

With regard to the relation of the picture to the wall on which it will be hung, the wall is the background, and when you think of framing you must think of the relation of the frame to the wall. Sometimes gilt will do this and sometimes silver. Gilt tones with more pictures than does silver and is especially good against cream, buff, and tan backgrounds, though silver will sometimes tone with these. A picture of a woman naturally requires a more delicate frame than a man's

fixing-bath is, we think, the worst form which such economy can take. Moreover, we do not think it is possible to name a quantity of hypo sufficing for the proper fixation of a given number of prints, since the conditions under which the fixing-bath is used vary so greatly. It is true that in the past several people have prescribed the quantity of hypo for a given area of paper. M. Lumière did so some years ago, and an American professional has recorded his experience of using hypo in the proportion of one ounce per 330 square inches of paper. But such figures are not applicable with safety to regular commercial conditions, for



"CATCH"

R. M. WELLER

SECOND PRIZE — SUMMER-SPORTS

photograph. Light-colored frames, as a rule, should be applied to light-colored pictures, and dark frames to dark pictures, unless there is a good reason for breaking the rule. Mats for the sake of mats are bad. Close-framed pictures are best. Very small etchings, however, need no mat, neither does a watercolor or engraving. The mat should not be a dead white unless white predominates in the picture. Gray pictures demand gray mats, sepias cream or brown mats, to match perfectly. The subject of artistic picture-framing thus has many different variations; but these few simple rules can easily lead the careful person to do the correct thing. These rules are the standard results of expert framing.

C. H. THOMAS.

Hypo for Prints

EVERY now and again, says *The British Journal* editorially, we are asked by correspondents to tell them the quantity of hypo which should be allowed for the fixation of so many prints. Although economy in the use of chemicals is not to be deprecated, stinting of the

in arriving at them more than customary care is taken to ensure each separate print being fully exposed to the action of the fixing-bath, whereas, in commercial practise, such is often far from being the case. Further, papers vary in the proportion of silver-salt which they contain, and also the temperature-factor considerably affects the useful work which a given bulk of hypo-solution will do. And if these causes of variation were not enough, there is a further one which is often overlooked altogether. This is the continuous dilution of the hypo-solution which goes on by the introduction of prints undrained from the developing-solution or wash-bath and the corresponding abstraction of hypo by removal of prints with a goodly proportion of fixing-bath adhering to them. From both these causes the strength of the fixer may be very substantially reduced without the user realising the fact. On all these accounts there is only one good rule for practise, namely, to use plenty of hypo and preferably to pass prints through two fixing-baths in succession. In the making of prints which command a fair price the cost of a triple or quadruple quantity of hypo above that which is theoretically necessary is insignificant.



WATCHFUL WAITING

ALEC BLACKIE

THIRD PRIZE—SUMMER-SPORTS

Simple Dry-mounting

WHERE a dry-mounting press specially made for the process is not available the use of the ordinary domestic flat-iron is general for mounting small prints, but such an iron soon cools. A billiard-table iron is larger and better. It is large enough to mount a cabinet-print at one operation; and it will retain its heat long enough to mount at least half a dozen prints, averaging $6\frac{1}{2} \times 8\frac{1}{2}$ size without the need of re-heating.

The billiard-table iron is too large to be heated conveniently in a saucepan of boiling water, as is often done with smaller irons; but a gas-ring is quite suitable. It should be heated until it just sizzles when the wet finger is put on it. If the tissue adheres to the mount only, the iron is too hot; and if to the print only, it is too cold.

Dry-mounting will cause a mount to cockle if moisture is present. Both print and mount, as well as the mounting-board, which may consist merely of a thick sheet of strawboard, should, therefore, be quite dry. When the iron is at the right heat, and the print and mount have both been connected to the tissue by means of the soldering iron, a sheet of clean, smooth paper is laid on the surface of the print, and the iron placed on

this paper. It must not rest on it for more than a couple of seconds, or the print may be marked; and it is better that the iron should be kept moving over the print until contact is complete. If the print is not absolutely flat, it should be turned over and ironed on the back, and quickly placed under slight pressure.

With this type of iron, a dry-mounted print may be unmounted without injury. The iron must be heated to a higher temperature than usual, and supported by two blocks of wood, so that the heated surface is uppermost. The back of the print is pressed in contact with the iron by means of a clean cloth; and in a few seconds the heated portion can be peeled from the mount, which is moved about until the whole print can be detached.—S. H. HALL, in *The Amateur Photographer*.

An Unsuccessful Photographer

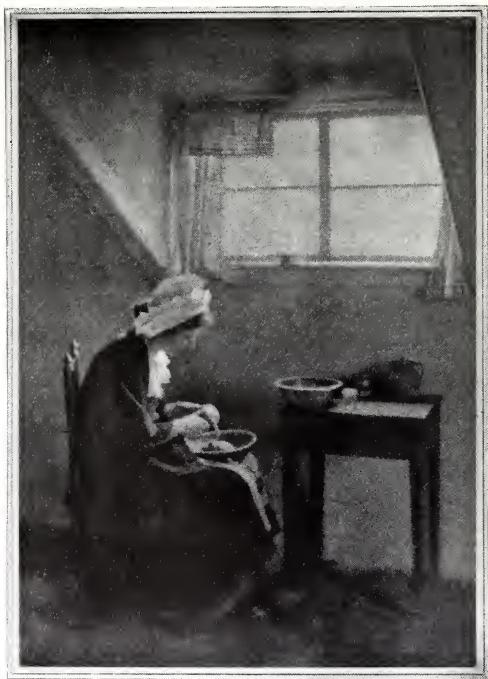
OVERHEARD at a recent photographers' convention. First photographer: "I always believe in making something for a rainy day."

Second ditto: "How much have you put by?"

First ditto: "Not a darned cent; but I believe in the idea."



SUBJECT FOR NEXT COMPETITION
ADVANCED WORKERS



A HOMEY TASK

MILLIE HOOPS

EXAMPLE OF INTERPRETATION

Advanced Competition—Indoor-Genres
Closes December 31, 1922

It has been said that Americans are living at such a rapid pace that the meaning of the word "home" is losing its significance and beauty. Motion-pictures, plays, clubs, lodges, dances and social affairs follow one another so rapidly that when these are combined with the pressure of business or professional duties, a man or a woman has virtually no time at all to be at home or to make a home for others. In a measure, those who live in a city are not to be blamed for the desire

to get out of the uncomfortable and tiny apartments in which they are compelled to live. However, even one room is "home" to those who make it so. It is my purpose to emphasise the home-element in this indoor-genre competition with a view to bringing out the fact that home is more often a matter of heart than anything else. The pictures submitted in last year's competition proved convincingly that it was possible to bring out the home-loving instinct of the average American and that, whatever may be said to the contrary, home is still "the best place in all the world" to most of us.

Genre-photography, whether indoor or outdoor, is one of the most difficult branches of photography to master. The human element involved is no small factor in the success or failure of the worker. On the other hand, there is much satisfaction in being able to solve the technical, artistic and human equations that follow one another in quick succession. During the winter, there are innumerable opportunities to produce delightful indoor-genres of home-life, family and friends. At the outset, remember that the value and charm of a genre is its fidelity to fact. It *must* ring true to be convincing.

In making indoor-genres, daylight, artificial light and flashlight-apparatus may be used. However, the least expensive illuminants at present are daylight, gas and electric light. A cloudy, bright day, between the hours of 10 A.M. and 3 P.M. during the months of November and December is particularly good for indoor-genre photography. There being no sun to cast heavy shadows or annoy the subject by its brilliancy, the camerist may work with comparative freedom. He will need virtually no diffusing-screens; and a sheet, placed judiciously to reflect the light where it is needed, should complete the necessary preparations. Of course, care must be taken to expose correctly and to use the plate or film best adapted to do this sort of work. This remark applies equally well to indoor-genres made by artificial light. A nitrogen-filled electric-lamp will produce a strong actinic light that will enable the worker to obtain excellent results at night. However, owing to the very intensity of the illumination, various forms of light-diffusion must be evolved in order to avoid extremely harsh contrasts and unpleasant facial expressions. Care should be taken to make sure that the electric wiring of the house and that the "service" electric current will permit such a powerful lamp to be used without danger of blowing out the fuses and otherwise injuring the wiring in the house or, possibly, the operator. In most cases, the use of a nitrogen-filled electric-lamp will cause no trouble, and it is by far the most effective illuminant because there is no smoke, noise or dust. Two or more of these lamps should answer all requirements.

Then, we have several excellent types of electric home-portrait lamps which use a special type of carbon in an arc, and these give out an intense though comparatively soft actinic light. There are also several excellent portrait-flashlamps on the market to-day that may be used with a minimum of danger, smoke and dust. Some remarkable improvements have been made within the last year, and the camerist who expects to do much of this work should obtain all available information from the manufacturers to insure getting an equipment that will meet his needs. Obviously, these outfits are more expensive than nitrogen-filled electric-lamps; but if the camerist can afford one of these outfits, he should be able to produce excellent results. Of course, the use of gas does not enable the worker to place the illumination where it will do the most good. However, a little originality will work wonders, and even a gas reading-lamp may be made to serve the purpose. Those who demur at the use of flash-powder should remember that the modern flashlight-outfit, with its flashbag, virtually does away with the smoke-nuisance; and, at the same time, so muffles the noise of the explosion that the subject is not perturbed in the least. If the worker will use flash-powder according to directions, and with care, there is no more danger to himself or to his subject than there is in motoring, canoeing or swimming. Of course, he who takes risks must pay the price of foolishness. Flashlights at night, or during the day when the light is

weak, arrest motion and permit the use of low-speed lenses that are fitted to cameras of moderate cost.

The making of indoor-genres demands an unusual degree of tact, artistic perception and a sense of humor. If the camerist attempts to succeed by assuming a dictatorial manner, or by forcing his models to do things that are uncongenial or unnatural to them, he will fail to make the sort of indoor-genres that the jury will approve. I cannot emphasize too strongly the necessity to make the picture conform to the characteristics of the subject. Moreover, do not desert fact to obtain effect. By that I mean, do not depict mother reading a magazine when she was never known to have the time because of the necessity to darn socks and sew on buttons; and do not show brother studying hard when he is notoriously averse to books. Even though strangers may not be aware of these discrepancies, often the models themselves will betray the deception by their stiff and "posey" attitudes. The best rule is to stick to truth, no matter how much opportunity there is to resort to pictorial dissimulation; but, in representing the models as reading, or looking at an object or a person, be sure to direct the eye so that the effect will be convincing.

The camerist should not lose sight of the fact that there are many desirable subjects for this competition to be found in the business and professional life of readers of PHOTO-ERA MAGAZINE. Also, there are many excellent opportunities in the every-day home-life of each one of us. We all see subjects of great artistic and human appeal; but we fail to make the most of them. Subjects for this and every competition are about us without number. The fault lies with us and not with any dearth of suitable material. A well-executed indoor-genre of the local grocer behind his counter; the lawyer advising a client; the literary man at his work, or even father lighting the morning-fire in the kitchen-stove—or shoveling precious anthracite coal into the furnace—are all likely subjects, if properly done. Let every camerist attune himself to the human and artistic values in the very simplest of subjects, and he will find that in this manner the masterpieces of old were reproduced. It seems to me that many times we seek to do the big things when by training, natural aptitude and equipment we are better fitted to make a success of the small thing. That is, in this competition, for example, some will not compete unless they feel that they have equaled or surpassed the interesting and excellent study on the opposite page. To my way of thinking, this is a mistake and will result in the stifling of all originality and incentive. Each worker should stand upon his own photographic feet and, regardless of the achievements of others, make his own place in photography. The jury passes upon each picture solely on account of its merit, and without any consideration of the name or reputation of the maker. We welcome the newcomer as heartily as we greet the work of old friends. Hence, let no camerist hesitate to hold his head up with the best of them and thus grow in photographic strength by honest effort and originality. Remember that true merit is bound to win.

This competition should give the camerist the indescribable delight to make an artistic, pictorial cross-section of American family-life. Often, what the eye sees is more convincing to the mind than what the ear hears. In making an indoor-genre the worker has an opportunity to enrich his own experience. After all, is it not the good things which we share with others that bring us the greatest happiness and satisfaction? The answer to the question rests with every true lover of photography.

A. H. B.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition
Wolfeboro, New Hampshire, U.S.A.



Prizes

First Prize: Value, \$2.50.
Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here is **without any practical help from friend or professional expert**. Or, in case of dual authorship, names of both should be given. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface paper and sepias are not suitable for reproduction, and should be accompanied by smooth prints that have the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins, but in every case, prints should be protected by strong, **stiff** boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

Awards—Beginners' Competition Closed August 31, 1922

First Prize: A. H. Scott.
Second Prize: Robert L. W. Schenck.

Honorable Mention: Augustus Abbott, Charles Ditchfield, Arthur W. Grumbine, Philip Mehler, Caleb J. Milne, 3d., Lilian F. Newton, Melvin C. Parrish, Anna Jeanice Walker.

The Beginner and Pictorial Composition

THERE are those who believe that the beginner or amateur photographer has his hands full with the technical mastery of a camera and photo-finishing, without adding a consideration of pictorial composition to his photographic problems. This may be so in some cases; but I venture to say that it will be to the beginner's advantage, from the very outset of his photographic career, to study the elementary principles of pictorial composition.

Let us suppose that a beginner has just bought a camera and that he is about to make his first exposures. He steps out into the street or goes to a nearby park in the search of subjects. More often, he arranges his relatives or friends for a group-picture. That failing, he selects the family cat or the neighbor's dog. In any event, he obtains a subject. The next step is to make the exposure. Some beginners are instinctively artistic and place the subject to good advantage. Others are not disturbed in the least by a telegraph-pole, a picket-fence or a pile of bricks for a background. It seems to me that the beginner who is so lacking in artistic judgment should not wait, but begin at once to train himself to look at the subject and its surroundings before making the exposure. In fact, to let this important part of good photography alone until a later date, will make it all the more difficult for the beginner to master good pictorial composition; for he will have to unlearn much that may have become a habit.

In this issue, William S. Davis concludes an excellent series of short lessons on pictorial composition. Every beginner should read these lessons and profit by them. Then, too, in the October 1922 issue, appeared that remarkably interesting and valuable article by Anson K. Cross about his wonderful drawing-glass which is revolutionizing the teaching of drawing and painting. Also, there are a number of excellent books on pictorial composition that are not too technical, nor too involved, to interest the beginner. After all, good composition means good taste in the making of pictures. In us all there is an instinctive desire to have the pictures that we make appear advantageously. Often, we know the effect we should like to obtain, but we do not know how to obtain it. Again, we dislike a picture but are unable to tell why. A knowledge of a few fundamental principles of pictorial composition will do much to help us to make and to understand good pictures.

Another important factor in the effect of a photograph is the arrangement of light and shade. Perhaps the picture may be well composed; but harsh lighting, too much contrast, black, untransparent shadows,

FIRST PRIZE
BEGINNERS' COMPETITION



WHITE BIRCHES

A. H. SCOTT

lack of detail in the highlights and other results of poor lighting will mar the picture and render it ineffective artistically and technically. The importance of lighting is nowhere more apparent than in the production of motion-pictures. The painstaking care with which directors utilise daylight and artificial light, not to mention all manner of screens, reflectors and other accessories, is evidence enough of the importance of the right use of illumination in photography. In a sense, there is less excuse to-day than formerly for poor lighting, because of the great improvements made in lenses, shutters and artificial lighting-apparatus.

In the study of pictorial composition, the beginner should not assume that it is merely a case of reading a few chapters in a text-book. What he reads is valueless unless he goes out and applies his acquired knowledge. He may read over and over again that there should be just one point of principal interest in every picture, but if he makes pictures that have two or more, he has gained nothing from his study. Again, he may read that the water-line in marine pictures should always be level; but if he produces pictures in which the water-line runs "up or down hill," he is no better off than before. In our competitions, many otherwise excellent pictures are rejected because the maker do not apply practically the theoretical knowledge that they have acquired. To be sure, the pictures may have been

excellent record-pictures; but, as I have pointed out many times, there is a difference between a record-picture and one that is artistically and technically a delight to the beholder.

It may not be apparent, but a thorough knowledge of plates, films, ray-filters, lenses and shutters is important in order to make a picture that is well composed and well lighted. Often, to know the limitations of one's photographic outfit is as helpful as to know what can be done with it. For example, if the camerist is eager to obtain good against-the-light effects, he should know how to set the shutter, lens-stop and whether or not a ray-screen will help him to obtain better color-values in connection with the use of orthochromatic plates or films. Again, it might be of great value to know exactly the angle of view of the lens he is using in order to include or exclude certain important parts of the general subject. Lastly, it is very important to know how to use the rising-and-sliding front that is provided on many cameras. Thus, it may be seen that thorough technical knowledge is essential to the making of a well-composed and well-lighted picture.

Perhaps, by this time, the reader is coming to the conclusion that to make a good picture requires altogether too much time and effort. However, let us suppose that we were considering the making of a good tennis-player. Certainly, we should agree that time



ROOF-RIDER

L. W. SCHENCK

and effort must be put into hard practice before the would-be player could hold his own on the court. Moreover, if he begrudged the practice and study required, we would say, "Very well then; if you will not practise, how can you expect to play a good game of tennis?" So it is with the beginner in photography. If he will not do the things that help him to make good pictures, how is he to become a successful amateur photographer? We may as well admit now, as later on, that there are certain principles in photography that must be mastered. In short, the price of photographic success is constant study and practice in the things that are essential to good picture-making. We may try to avoid the issue or try to gain success by some short cut; but let me assure the reader that it cannot be done. After all, there is a tremendous amount of pleasure and satisfaction in getting down to photographic fundamentals. The beginner who is really interested in photography and eager to make a success of it, welcomes the opportunity to learn all that he can; and one of the most interesting subjects is pictorial composition.

A. H. B.

Pictorial Photography and the Public

It is one of the handicaps under which pictorial photography labors that its results are to a great extent a sealed book to the general public, says *The Amateur Photographer* editorially. Anyone who accompanies a non-photographer on his first visit to one of our leading

exhibitions cannot fail to be struck by the surprise with which the work on view is regarded. It is probable that this surprise will be unaccompanied by any expressions of approval, unless it is for a few of the more commonplace exhibits; but this we can disregard, since it is not to be expected that anyone to whom the work as a whole comes as altogether unfamiliar can be expected to be able to exercise discrimination of any value. We may flatter ourselves that we are making headway—so we are among ourselves. But among the great body of the public the progress is so small as to be practically unappreciable. A similar example is that of a guide-book recently published. The letterpress was good enough, no better and no worse than that of half a dozen others; but the enterprising publisher had asked us to recommend a pictorial photographer of standing to illustrate it. The pictures were easily the best we have ever seen in a work of the kind; but up to the present we have not seen any reference to them, even in the most appreciative reviews, in the lay press. It is evident that the reviewers into whose hands it has fallen are quite unable to recognise that the work is any better than, or even any different from, that of the ordinary picture-postcard type to which they are accustomed in such books. On the other hand, it may be contended that the approval or criticism of those who are not expert is a thing to be disregarded. We agree. But the fact that the great body of our fellow-citizens are not only inept, but are even unconscious of the existence of the art, is not quite the same thing. Whether it will be remedied is a matter for speculation.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



An Economical Printing-Method

IX these times of high prices, there are, perhaps, many readers who will be pleased to know of a photographic printing-process that will give prints but little inferior to platinum-paper, yet which can be easily prepared personally, is much cheaper than silver-paper and very much less expensive than platinum, which is so costly as to be practically prohibitive.

Kallitypy is an old process that fulfils all these conditions. It depends on the sensitiveness to light of ammonium ferri-oxalate, which is reduced by exposure to light to ferro-oxalate, that readily precipitates silver from its solutions. Many recipes have been published to prepare the paper; but the greater part of these are more or less complicated and give prints of a poor tone that require toning with gold, which is expensive.

The best sensitising salt, that does not liquify and is not affected by the air, is the *green* ferri-oxalate; as developer, silver-nitrate is used. The different solutions required for kallitypy are: (1) ammonium ferri-oxalate, 20 per cent.; (2) silver-nitrate, 2 per cent.; (3) ammonium bichromate, 1 per cent.; (4) oxalic acid, 1 per cent.; (5) hypo, 10 per cent.

The paper may be a smooth, well-sized drawing-paper rather thick to avoid the necessity of mounting. Sensitising the paper is best done by candlelight, so that when coated it can be dried quickly over the flame. For applying the sensitiser use a soft, wide brush, which is dipped in solution No. 1 and brushed crosswise and lengthwise on the paper until the liquid is no longer taken up, which is indicated by a uniform glossiness. The brush is then pressed dry and worked over the paper to remove any superfluous liquid, as there must not be enough left on the paper to flow together when held in a slanting position. The paper is now dried by the gentle heat of the candle, which will take but a few minutes.

As the picture is hardly visible after exposure, this must be done with the help of a photometer, proceeding as follows: Take a narrow strip of the same paper as that to be used for the print, as long as the negative. This is sensitised the same as the other paper and when dry is laid on the negative in the printing-frame so as to include the most important parts of the picture. If the negative is normal, the strip is printed first to No. 8 of the photometer; then slip a piece of black paper between the negative and the strip for about one-third of its length, and print again to No. 10; move the black paper along for another third of the plate and print to No. 12. Now develop the strip by candlelight, using a portion of solution No. 2 in a tray and drawing the printed strip face down through it. The printing will instantly appear in a fine black tone. After rinsing in water the strip may be examined by daylight at leisure and the proper time of exposure can be judged by it. The prepared paper is now exposed, developed and washed for ten minutes in running water; it is then placed in solution No. 4 for one or two minutes to remove the remaining iron-salt, and washed again for ten minutes. Finally, the print is fixed in solution No. 5 for five minutes and washed again for half an hour. The prints are best dried between

blotting-papers with light pressure, changing the paper several times to facilitate the drying.

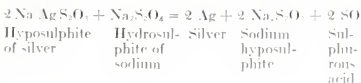
This process requires comparatively strong negatives; but if a weak negative is to be printed, strengthening may be avoided by adding a few drops of solution No. 3 (ammonium bichromate) to the sensitising solution. The silver-nitrate before using is not sensitive to light, but after using for a few times it becomes so and precipitates the silver when exposed to light. To preserve it, keep it corked in a dark-brown bottle and in a dark place. The sensitising solution should be kept the same way.—*Photographische Rundschau*.

Reproducing Stained Films

IT very often happens that a photographer is called upon to make a print or enlargement from an amateur-developed roll-film negative in which large yellow patches have appeared as a result of uneven fixation, remarks the *British Journal*. This defect is usually due to the "pull through" system of development and fixing, when the film is usually put to wash immediately the unaltered bromide has disappeared. As no isochromatic bromide papers are on the market, it is necessary to reproduce such negatives. By using an isochromatic plate and yellow light a clean transparency may be easily obtained. If this is to be of the same size as the original, the exposure may be made through an ordinary yellow glass, or even by the yellow light used for developing bromide prints, but for enlargements or reductions a yellow filter, as used for outdoor work or copying, becomes necessary. It is sometimes possible to remove such stains by means of the cyanide and iodine reducer, but if this be not possible, or if the negative is of great value, the reproduction-method should be adopted.

Restoring Old Fixing-Baths

OWING to the present high cost of hyposulphite of soda, a method of regenerating old fixing-baths, and at the same time recovering the silver contained in them, is worth attention. A new method devised by A. Steigmann consists in adding to each liter of old fixing-bath 8 grammes of sodium hyposulphite and 8 grammes of sodium carbonate. At 140 F. about 5 grammes of pure silver is precipitated according to the following formula:



Therefore there will be recovered from the double combination of silver hyposulphite in the old bath not only the regenerated hypo but also whatever silver may be contained in it. The fixing-bath may, by this treatment, be used over three times.—*Kolloid Zeitschrift*.



OUR CONTRIBUTING CRITICS



OPENING THE PASTURE-GATE

CHAS. T. GRAVES

YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the last day of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

CERTAIN words and phrases are usually associated with depth of tone when pictures are mentioned or titles given. The high tonal key in which the picture entitled, "The Approaching Storm", is rendered, does not seem to justify the title. A better title would be, "After the Storm". In composition, two grave mistakes were made. First: the almost total lack of atmospheric perspective, the values of the fore, middle, and distant planes being very nearly equal. Second: the repeated, uninterrupted horizontal lines in the background. This feature not only transgresses the laws of good composition, but prevents one from "reading the picture" correctly in the sense of using line and light to keep the eye or interest from wandering out of the marginal confines. Constructive criticism on this point would be to select a slightly lower view-point, causing the lines of verdure to run across the distant horizontal lines and to project slightly against the lower sky. Prove this by lightly sketching in lines continuing the tops of the reeds across the distant lines. A noticeable

improvement will be seen in concentration of interest. Dr. Rohdenburg is to be given credit for three good features, *viz.*, a nice sense of artistic appreciation in handling—the principal masses are ably balanced and the line of light water does not start from exactly the bottom center or from exact corner.

L. B. LEEDS.

I HAVE looked long and earnestly at Mr. Rohdenburg's picture, "The Approaching Storm", and so far have been unable to determine just what the background was meant to show. The rushes in the foreground indicate that the mass of white in the center of the picture is water; but then comes an irregular dark streak across the picture that may be land, but the definition is so uncertain that it is impossible to tell from the illustration. Beyond the dark streak, there is a narrow, white one running clear across the picture; and, so far, I have been unable to decide whether it is water with a mountain beyond, or whether it is a patch of sky showing beneath a heavy mass of clouds. Anyway, that white streak spoils the picture for me. The dark mass in the extreme background might be a mountain with light-colored clouds rolling over it toward the onlooker, and concealing the peaks of the range, thus giving the picture its title; or it might



THE PICTURE CRITICISED THIS MONTH

be a mass of clouds, as first suggested. I really cannot decide which. However, the lack of detail in the whole picture makes it one that can be interpreted in several ways.

A. L. OVERTON.

WERE it not for certain obvious defects of technique, this picture might have been a masterpiece. Its general conception is superb. It is quiet and restful—suspiciously so. The atmospheric effect is exquisite. The driven cloud is convincing. The stillness of the reeds in the foreground is suggestive and portentous.

But the "soot-and-whitewash effect" of under-exposure of the background of water kills the picture. The data say: 1/20 of a second at F 16. Assuming that 1/20 was all the time possible without showing motion, the artist might better have used, let us say, F 8, and have given us a truer interpretation of values. If the black horizontal streaks represent cloud-shadows, and, if circumstances permitted, a less geometrical pattern would have been more artistic.

It is a pity; for it is the sort of picture that a city-man would like to have on his desk to look at, once in a while, amid the noise and clamour, the soot and dust, the stress and strain of his daily work—to look at and be refreshed for one brief moment—to dream and to praise God!

E. L. C. MOISE.

GENERAL idea and use of simple material are to be commended. Spacing of the grasses in the foreground is excellent, balance being maintained without duplicating the size of the two major masses, or the open space between. Tone of the sky expresses well the title, and is in perfect harmony with the foreground, although the clouds near the center appear to have been put in, or at least "worked-up" a bit.

The weakest portion is the middle-distance and distance. The eye, after being nicely led into the picture by means of the open space between the grasses, goes at once to the horizontal streak of white and travels from side to side without finding a focal-point to rest upon. Furthermore, one is left in doubt as to what the light portions represent. Is it still water or a sandy beach? Whichever it is, a slightly lower tone, and confinement of the highest light to parts nearest the foreground, would "pull the composition together" and give a stronger feeling of recession to the more distant planes.

WILLIAM S. DAVIS.

DR. RODENBURG's composition lacks balance. If the cloud-mass were placed nearer to the right side instead of the left, it would balance the creek or path in the foreground. As it is, the picture gravitates unduly toward the left margin. Trimming about $\frac{3}{4}$ " off the right side would balance the composition and concentrate attention on the storm-cloud, the center of interest. Jumpiness of tone-values: The water, now showing as a band of highlight, ought to be toned down considerably to blend better and avoid detracting attention from the storm-cloud. The foreground could be considerably lower in tone, so as to give a better effect of distance across the water and beyond into the sky. Excellent in execution and worthy of study is the composition of lines and spacing, and the realistic impression which the picture gives of solitude in the landscape and expectancy in the air.

HERBERT RODECK.

"THE Approaching Storm", presented for criticism, is a fine example of pictorial work along modern lines and shows careful attention to tone-quality, although,

Continued on Page 271



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE frontispiece, this month—subject repeated on the front-cover—is a marine by F. W. G. Moebus, who specialises in this branch of photography. A superb view of a full-rigged ship at sea, from his copious portfolio, received a prize in the June competition ("Marines") and demonstrates his experience and familiarity with his chosen branch of work. In his "Ships at Anchor", the artist shows his admiration more for the magnificent setting than for the anchored ships, which, if they were moving, would serve to mar the picture, followed, as they would be, by the distant sailing craft headed in the same direction. The whole scene is impressively interesting, although there is a tendency for the eye to hesitate before it rests on the beautiful sky. Perhaps this inclination could be obviated if, let us say, half an inch were removed from the bottom of the picture. Then the foreground with its alluring reflections would be less prominent.

Data: August; good light with sun partly obscured by cloud; 4 x 5 camera; 6-inch Plagimat; stop, F/8; 1/100 second; Eastman film; pyro; enlarged on Artura Carbon Black.

August Krug, in his delightful story of constructing a soft-focus lens from the separated lenses of an old Petzval portrait objective, tells us that he has been doing considerable experimental work with this home-made lens, and the portrait of a young girl, page 229, is one of the results. It may be that it is a study in expression. The data do not enlighten us. For a serious portrait, the light seems to come straight from the front—a condition usually avoided by discriminating workers, as it yields no shadows, but rather effects that are monotonous, and prevents anatomical accuracy in the rendering of the features.

Data: 8 x 10 camera; home-made soft-focus lens (focal length not stated); stop, F/16 approx.; Eastman Portrait Film; Elon-pyro; print, Artura Iris E. Smooth, from unretouched negative.

The illustrations to Mr. Davis' text, pages 238 to 242, are illuminating and helpful as usual.

In her photographic copy of a colored print, page 252, the photographer introduced what appears to be excessive contrast. I recall that the original, a painting by Carlo Dolce in one of the European art-galleries, is composed largely of highlights, the effulgence of holy light (illumination) emanating from the Christ-child. I have yet to see a photographic print which does justice to this extremely difficult camera-subject.

Of the five European pictures by Dr. Adolf Eyermann appearing in PHOTO-ETICA MAGAZINE, two are scenes in the Black Forest. One of these (Schwarzwald-Haus) was published in the August issue, the other (Charcoal-makers at Work) is in the current issue, page 256. The men are busily occupied, unconscious of the presence of the camerist. The air is charged with smoke, the whole scene being typical of that famous region. A well-known Boston physician has just returned from a trip through the Black Forest, greatly impressed with the unusual things he saw—described in "Our Illustrations" for August—and delighted with the generous and substantial hospitality extended to him and his family (wife and daughter). Foodstuffs were scarce; but what the host *did* place on the table for the benefit

of his guests—well, let's talk about the weather. It's more profitable.

Data: February; 11 A.M.; cloudy; Linhof camera 6.5 x 9 cm.; Dr. Ståble Polyplastigmat; stop, F/6.3; 1/50 second; dryplate; metol-hydro; 5 x 7 inch enlargement on Mimosa Verotype (gaslight) paper.

Advanced Workers' Competition

As our readers well know, thematic originality is the chief requirement in these competitions. Naturally, it must be wedded to adequate technical skill and artistic expression. Many are the efforts founded on admirable intentions, but the medium to bring them to a successful, convincing conclusion was inadequate. On the other hand, in trying to preserve the element of spontaneity of action or expression—a valuable asset in the appeal of a genre-study—the artist may be obliged to sacrifice attention to comparatively unimportant details, so that synchronous unity or harmony of all the constituents of a pictorial composition may not always be possible.

A pictorial worker may arrange his models in accordance with a preconceived idea, and at the supreme moment one or both of them may suddenly decide to change the pose, to the obvious detriment of the artist's conception. The exposure is made with the result that the print shows certain incongruities that escaped the notice of the artist or were impossible to prevent. These and other incidents are considered leniently by the jury, although in the case of the present first-prize picture, by Dr. Pardoe, page 259, there was no serious need to overlook or to excuse any lapses in technique.

The frivolous summer-girl includes in her interpretation of a good time the sport of toying with men's hearts—a mild form of amusement known as flirtation. It is not my intention to view the moral aspect of the case, nor to speculate on the outcome of the affair portrayed so skillfully by Dr. Pardoe. The girl's attitude in the matter is hypothetical, although she warns her admirer to "quit this nonsense!" or words to that effect. There is an air of sincerity, a businesslike action, on the part of the youth, and an expression in his "peach of a girl" that informs the beholder that the game is on. The theme is strikingly original—in a pictorial sense—the setting artistically appropriate, the choice of the lighting supremely effective and the workmanship excellent. In view of what Dr. Pardoe has already achieved—in the realm of nature-photography and general genre-work—this, his third successful attempt to land the capital prize in the Advanced Workers' Competition, exemplifies his versatility as a creative artist.

Data: At Lake Hopatcong, N. J.; August 30, 1921; 4 P.M.; bright sunlight; 5 x 7 Korona camera; 11-inch Protar; stop F/7; 1/25 second; Eastman Portrait Film; pyro; mat-surface bromide enlargement, 11 x 14.

The number of photographs which portray child-life that have come to my personal attention as a photographic editor is very large; but a group just like the one presented on page 260 has not been entered in any of these competitions, probably because of the

subdued character of the theme. The attractiveness of the models and the effective, well-managed surroundings, however, are contributing factors in this delightful composition, which won its way into the hearts of the judges.

The winning attitude of the child as she reaches expectantly for the ball, and the careful manner in which the mother—or, perhaps, an older sister—is tossing it, combine to make a most charming picture. No data.

A boy or a girl? Well, who cares! Yet this very fact imparts a certain mystery and charm to the patient little fisherman with face hidden behind a mass of curls. Page 261. The spacing, which allots the upper left corner to the subject of dominant interest, is admirable. The values and perspective are extremely good, and the management of a somewhat popular pictorial topic very praiseworthy.

Data: A four-year-old child fishing from the stern of a flat-bottom boat in the waters of Lac St. Anne, Northern Alberta; August; 11 A.M.; bright light; 3A Kodak; 5-inch R.R. lens; stop, F 11; 1/25 second; Wellington Anti-Screen; pyro; enlarged on Wellington B.B. Bromide.

Beginners' Competition

AGAIN, a participant in the junior competition wins the first prize by means of a pictorial achievement that compares favorably with the best efforts of more experienced workers. It is a joy to look upon—with its eminently artistic design, delicate light-and-shade effect, beautiful values and harmonious ensemble. My compliments to the arriving young master!

Data: In the Berkshires, at Pittsfield, Massachusetts; July 2, 1922; 10:30 A.M.; bright sunlight; 1/10 second; Ica Ideal 9 x 12 cm.; 13.5 cm. Carl Zeiss Amatar; stop, F. 8; Eastman Standard Film Pack; Elion-Hydro; Artura Carbon Black, mat-surface; approx. 3-time enlargement.

The technical qualities of Mr. Schenck's portrayal of an ever-popular child-theme, page 266, are so unusually good, that it was awarded a prize in this competition. Aside from this, the youngster, who does not appear to be exceeding the speed-limit imposed on ambitious drivers, has come to a sudden, "hair-raising" stop and occupies a well-planned position in the picture-space—thanks to the admirable judgment of the camerist. Every beholder of this pleasing picture will join me in the wish that, when, years hence, this embryo motorist shall drive a "fierce, harrowing" machine, he may obey the commands of the traffic-officer, the rules of the road, and common sense, and be spared any mishap to others and himself.

Data: Picture made on roof of building; June; 3:30 P.M.; bright sun; 4 x 5 Rev. Back Auto Graflex; 8 1/2-inch B. & L. Tessar; stop, F. 8; 1/90 second; Graflex roll-film; Rodinal; contact print on Azo No. 3; Rodinal.

Example of Interpretation

THE subject that is to stimulate participants in the "Indoor-Genres" competition, which closes December 30, this year, forms a delightful composition. As the "homely task" is seemingly performed not in the kitchen, but in an upstairs room, it may be conjectured that the young housewife is occupying an apartment or, perhaps, rather cramped quarters, not far from the roof. This suggestive setting is what gives the picture a peculiar interest. It is, therefore, the unconventional which should be considered by the resourceful participant in the December competition for Advanced Workers.

Data: May; good light; Eastman 5 x 7 view-camera; 6 3/4-inch Verito; stop, F. 6; 1/16 seconds; Eastman's Commercial Ortho; Actinol; Palladiotype print.

Our Contributing Critics

As I have indicated, in reviewing Dr. Pardoe's prize-picture, it is very rare that, at the moment of exposing a pictorial composition, all the elements under consideration are coincident. Something quite unexpected may go wrong. Sometimes, the artist is conscious of the intrusion or break, but does not allow it to embarrass him; and at other times he does not discover the unwelcome change in his artistic plan. And then, again, he is not aware that anything serious has happened after his satisfied survey of his picture. Very frequently, however, the camerist has shown poor judgment in selecting his subject, especially the setting or the surroundings, or has made no attempt to correct or modify glaring errors in composition—if he is aware of their existence. Here is a thought that may be well to be borne in mind by our discriminating assistant-critics when they study the pastoral scene offered by Mr. Graves, on page 268.

Data: A scene in Pennsylvania; May, 1921; 4 P.M.; bright light; Anso V.P. Speedex Camera (2 1/4" x 3 1/4"); 3 1/2-inch lens, F. 6.3; stop, F/11; Eastman film No. 120; pyro-soda; print, Artura Carbon Black, Extra Heavy; Elion-Hydro.



Our Contributing Critics

(Continued from Page 269)

doubtless, it loses much in halftone-reproduction. Undeniably artistic, yet as a portrayal of its title, it lacks in conviction. The essence of an *approaching storm* is motion, and I would plead for more evidence of it in the picture. As the cloud-element predominates in a storm-composition, the horizon-line should be lower, thus giving full scope for the delineation of overhanging, driving storm-clouds; more character to the water, thereby eliminating the band of white which cuts the picture in two; a diminished foreground, but enough of wind-swept vegetation to form a base. Watch the next approaching storm!

J. W. ADAIR, M.D.

THIS print comes under Mr. Freuch's general criticism of "Marines". The maker was not so careful as he might have been. The foreground is out of focus and the trimming is at fault. I do not like the parallelism of water-line and shore-line, as it does not look right and does not conform to my recollections of the sea-coast, as I can recall only beautiful curves; but my sea-knowledge is very limited, as I am a land lubber. The enlarging-work is fine and shows plenty of care and thought; the tonal qualities of print look as if it were an original "soft-focus" product. This print shows that the utmost care and consideration must be used when selecting small portions of a small negative for enlargement. The selected portion should be studied under a good magnifying-glass. It would appear that the maker selected the portion for his enlargement owing to the good leading-line through the rushes. I think that liberal trimming from the right would give a better-balanced picture.

J. E. CARSON

Prints to be Hand-colored

FAULT is frequently found with photographic prints which have been painted in oilcolors or watercolors, because the colors do not assert themselves. Of course, a print made from an ordinary dryplate-negative will show certain colors of the original autumn landscape—red, orange, purple or light green—much too dark and, when covered with watercolors or transparent oilcolors of the corresponding shades, these places or masses look lifeless and unnatural, simply because the photographic base, underneath the colors, is virtually black.

To overcome this difficulty, the colorist should have photographs that have been printed in a light key (underprinted) or, better still, prints from negatives made on panchromatic plates aided by a medium-yellow color-screen (K3) which will give correct color-values in monochrome ("black and white", for instance). In coloring such prints, the artist will be able to reproduce accurately the colors of the original subject, be it a landscape with multi-colored foliage or flowers, a person in a brilliant costume, an oil-painting or watercolor, a vase with flowers, a basket of fruit, a box of colored candies, etc.

This method ought to interest colorists of lantern-slides, and, in both cases, the Roehrig or the Meteor Photographic Oilcolors or the Japanese Transparent Watercolors will be found unsurpassed for transparency, permanence and beauty.

International Exhibition of Photography at Geneva, Switzerland

THE SWISS National Exhibition of Photography for 1923 will be held in the Palais Electoral at Geneva, Switzerland, from May 11 to 21, 1923, and in connection there will be, at the same time, an International exposition of photographic apparatus and photographic supplies, open to Americans as well as Europeans, in the galleries of the building. The national exhibition will comprise three sections: professional photographers, amateur photographers, and former professional employers and employees and professional employees actually in service.

In addition to the National Exhibition, with its three main sections, there will be an historical exposition, dedicated to the memory of Daguerre, in the reception-room of the Council of State. Another exposition, comprising all materials relating to scientific, documentary, and judiciary photography, is in contemplation.

Conferences, general assemblies and meetings of the principal Swiss photographic associations are contemplated, and it is hoped that great interest will be shown by all engaged in photographic and allied lines and that the attendance will be large. Americans desirous of obtaining space for the exhibition of apparatus and supplies should address the Directeur de l'Exposition Nationale Suisse de Photographie, 12 Boulevard du Théâtre, Geneva, Switzerland.

Much Information in a Little Book

At the recent New England Photographers' Convention at Maplewood, New Hampshire, manufacturers and dealers displayed the latest photographic apparatus and accessories for the benefit of professional photographers from all over New England and Canada. As we all know, practical information is essential; and valuable facts are contained in the descriptive matter

that is issued and distributed free of charge by manufacturers and dealers. Among many excellent booklets and folders now to be obtained is a revised edition of "A Short Talk on Negative-Making", distributed by the Hammer Dry-Plate Company, St. Louis, Missouri. There is much practical information and good common sense in this neatly-printed and well-written booklet. Copies may be had from the manufacturers at request.

Exhibition of Foreign Photographic Art

WE very much regret that notice of an Exhibition of Foreign Photographic Art lent to the Camera Club of New York by the Smithsonian Institution—U. S. National Museum, Washington, D. C., from October 1 to October 31, 1922, did not reach us prior to our going to press with the October number. We have tried very hard to impress camera-club secretaries that material for a particular number should be in our hands at least three weeks before the publication-date. We are eager to print all such announcements; but obviously they are of little interest and value when the exhibition or event is passed. Hence, in the present case, this exceptional foreign exhibition is over; but we feel that our readers would be interested to know the names of the exhibitors from Europe. The list comprised Malcolm Arbuthnot, Angus Basil, Charles Borup, Sr. Bridgen, F. R. P. S.; Fred. Judge, F. R. P. S.; Alexander Keighley, F.R.P.S.; Kate Smith and Louis J. Steele of England; J. Craig Annan of Scotland; J. H. Coatsworth of Egypt; Leonard Misonne of Belgium; Richard Polak of Holland, and Guido Rey of Italy.

International Studio for August

OUR readers doubtless have had their full share of color-photography (Lumière and Paget) of late, so that it may be profitable to turn aside for a moment to admire a number of superb examples of photo-mechanical color-printing which are the outstanding features of the *International Studio* for August. These six color-illustrations are of world-famous spinets, originals and harpsichords which accompany an article by Karl Freund—"From Harp to Harpsichord", and will be enjoyed by all art- and music-lovers.

Of additional interest is a series of half-tone reproductions of paintings, by George Townsend Cole, of American deserts, showing the power of the brush to interpret this class of natural scenery as compared to the ability to portray it by means of the camera in the hands of such master-photographers as Herbert W. Gleason, Geo. R. King and others. Art-lovers will also read with delight a beautifully illustrated article on the centenary of Rosa Bonheur, the celebrated animal-painter, whose eminent masterpiece, "The Horse-Fair", is one of the great treasures of the Metropolitan Museum of Art, New York. This special number of the *International Studio* further contains a liberally illustrated account of the work of Edward W. Redfield, one of America's foremost landscape-painters. The above-mentioned and other valuable features serve to provide material for an hour of delightful and profitable reading.

A Dangerous Mission

Jack—"Have my photograph taken before I see your father? What's the idea?"

Madge—"You may never look yourself again."

Exchange.



ON THE GROUNDGLASS

WILFRED A. FRENCH



The Pyro Club Still Alive

THE fall-season got under way—it did *not*—with a much-talked-of lecture and show on color-photography of Robert Lee Hayden, whose wife's folks live in this burg. But, thirty miles from here, on that night, the "oughtochromist" busted a tire and ran out of gas, so the show didn't come off until a week later. It was some show. Say! that man Hayden knows his business all right! . . . A big crowd had blown in, that first night, and while waiting for the hot-air artist to arrive, President Wheeler suggested that those who had visited New York during the summer "please rise and tell your adventure." Unanimously agreed to.

Fred Carson led off. He told how he let a "brother" amateur use his Graflex to snap an auto accident. He kept alongside of him all the time; but when next he opened the camera to make a snapshot, the lens, an F 4.5 Cooke, was gone! He left word with a New York detective to try and recover it for him. Meanwhile he is trying out an F 4.5 Ilex Anastigmat, which is giving him bang-up results. The prints he showed sure prove it.

Babe Muller—265 lbs, in his B. V. D.'s—I have his say-so—was on his way to Willoughby's to get one of those new French motion-picture outfits when, right in front of the store, he saw a man pick up a pair of gold-rimmed eye-glasses. He offered them to Muller for one buck and Muller closed the deal. Entering Willoughby's, he ran into manager Riegles and showed him his find. "Worth ten cents. Cheap stuff!" was all the manager said. Seeing Muller sore, being badly stung, he explained how this old game was pulled off several times a day and always some out-of-town chap would fall for it. Anyhow, Muller blew himself to that movie camera and hopes to show the club some dandy work done in New York with it.

Dick Blaisdell examined a "Beely" Ica in Fortys-second Street and fell for it. He had lots of fun trying it out in Central Park. He left the exposed plates, eighteen of them, at some corner drug-store, to be developed. All ruined and no comes-back! The alibi they gave was, "No guarantee; regular man on vacation!" He exposed a dozen more, but developed them himself, after he got home. No trouble at all. The wee camera is a jim dandy! Letting out a chuckle, Taylor suggested Blaisdell send one of his best prints to Beely Daniels (Bebe Daniels). Everybody howled.

Simon Wing "Simple Simon", called in fun was the next victim. He kicked at being called on, but gave in gracefully. Told how he was snapping some pictures with his Brownie on Nassau Street, when a guy told him they were giving away kodaks at No. 123—a sporting-goods store. S. S. was off in a jiffy, walked into the place, noticed a large sign, helped himself to a fine folding kodak and, without saying "Thank you!" walked slowly out. As he turned into Wall Street and was lamping his prize, a man breathing quite hard, grabbed him by the arm and with a persuasive "Come along with me!" helped him back into the gift-shop. "I've got the crook and the kodak, too!" he yelled gleefully. S. S. was flabbergasted and kicked

like a steer at being called a crook, explaining and pointing to the big sign. He got everybody roaring with laughter, and they let him off. The sign read plainly enough, "Take a Kodak with you."

Nine others had to toe the mark. DuBois, Reuther, Savage, Mora, Kendall—even Mrs. W. (got stung at an auction-sale on Broadway, paying five dollars for a pair of imported opera-glasses worth seventy-five cents!)—all told their yarns like good sports; but not a peep from President Wheeler. He looked innocent, hadn't a thing, he said; but after some coaxing he gave in.

He said that he went the rounds of the principal dealers, as a matter of information, and admitted that he learned a lot. No accident, no hold-up, no lemon; but he did have a hectic time with the Swiss watch the club had given him on his twenty-fifth wedding-anniversary. As a timekeeper, his Patek-Philippe was simply marvellous. Always with the sun! Just to prove it, he stopped a gentlemen on Fifth Avenue, one fine morning, and asked him the time of day. The highbrow pulled out his showy American watch, compared it with President Wheeler's and remarked dryly, "You're three minutes slow." Not a bit phased, our president politely thanked him. A mite suspicious, though, he glanced at a big sidewalk clock. Nearly two minutes ahead of his P. P.! That won't do; so he stopped another likely-looking gent. Comparing watches, he found his Swiss time-keeper two minutes ahead! He was getting restless, peeved. He took a taxi to Fulton Street, and, passing old Trinity, he glanced up and compared time. He was one minute slow! He was really getting nervous. In New York City, and his costly Swiss watch off its trolley? *No, Sir!* He stopped and got a few dozen Wellington's Anti-Screen plates, on Park Row, where the office-clock said 11.30. He was 11.29! His precious P. P. go back on him? Nothing to it! Having an important errand at Harold Bennett's, on West 23d Street, he taxied in that direction, noting clocks on buildings and sidewalks along the route. He felt rotten; they all agreed with each other, but not with him! The elevator now took him up to the tenth floor, to Bennett's office. Buying a supply of Mimosa gas-light paper, he asked for the nearest chronometer. "Diagonally across the street. None better!" he was directed. A few minutes later, excited and anxious, he was standing in front of the jeweler's window, watch in hand, looking at the infallible chronometer and then at his P. P. He nearly dropped it, for he was suddenly overcome by—"That Grand and Glorious Feeling!" The chronometer and his Swiss time-piece were *exactly on the dot!* He went back to Bennett's and left the club's order for an Ica Enlarging and Projecting Box.

We all agreed that the way our president told his story was pretty slick. They all did well. In fact, Kimberly moved that Charlie Hughes, official cartoonist of *Judge* and *Pyro-Ex*, be engaged to draw a series of sketches of these classy doings, and for members to make them into lantern-slides for a big winter-entertainment. Seconded and carried with cheers.

The impromptu meeting was over.

T F J



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



New England Photographers' Convention at Maplewood, New Hampshire

As the late afternoon sunlight tipped the White Mountain peaks in splendor and lengthening shadows crept into the valleys and along ravines, September 18, 1922, photographers were coming to Maplewood, New Hampshire, from all parts of New England and from Canada, by train and by automobile. The air was cool, clear and invigorating. The mountains seemed never so beautiful. The ride up through the Crawford Notch by train or automobile was an experience never to be forgotten by those who came by that route. Others came by way of Plymouth, Lost River, The Flume, and the Franconia Notch. Still others came down from Canada, from Maine, Vermont, Massachusetts, Rhode Island, and Connecticut by routes that revealed the exceptional beauties of the Granite State. As the twilight deepened and the cool night wind swept down from the mountains, the lights of the Maplewood Club shone out a welcome to the travelers. Warmth, good cheer, and cordial hospitality soon contributed to make the clasp of friendly hands and the renewal of old acquaintance a fitting close to a perfect September day. Those of us who live in New Hampshire knew that the good old Granite State had outdone herself to display her scenic beauty and to make welcome our friends.

FEATURES OF THE CONVENTION

The outstanding feature of this 24th Annual Convention of the Photographers' Association of New England was its inspirational atmosphere. From the opening day, there was a spirit of looking up and out to higher and better things in photography. Moreover, as business men and women there appeared to be a clear realization that the future of the profession depended absolutely on the moral and spiritual standing of every photographer. Again and again was this fact brought out by speakers on the platform, and by individuals in private conversation. In fact, as one listened to the speakers and chatted with friends, a feeling of pride in the craft crept over one and it was good to be there to receive it. As George Harris, of Harris & Ewing, Washington, D.C., put it in one of his talks, "Photography is one of the best means of livelihood that God ever gave to man!"

From the point of view of those who have attended the P. A. of N. E. conventions for many years, the 24th outshone all the rest in the splendid co-operation received from outside organizations and individuals, in the excellent hotel accommodations, in the forceful and helpful speakers, in the unusual entertainment provided, in the large picture-exhibits, in the efficiency of the officers and in the attendance of over three hundred ladies and gentlemen whom it was a pleasure to meet. Even those who could not look back ten or twenty years were enthusiastic over the manner in which details were managed to help make this convention an inspiration to every one present.

The most important part in the success of the convention may be granted to the speakers. After all, it was to them that we looked for the words of encour-

agement, criticism, instruction and enthusiasm that did so much to make us resolve to dignify the photographic profession and to be an asset to every community in which we lived. Without an exception, every speaker had a message that went right to the heart of things. There was the cordial welcome extended by L. B. Painting on the opening day. Then that heart-to-heart talk by Paul True which sank deep because of its very simplicity and power. As for Will H. Towles, who gave demonstrations with artificial lighting, enough cannot be said of his kindly, friendly talks which helped, encouraged, and taught the fundamentals of lighting in a way that won his audience. Perhaps, no speaker was more enthusiastically received than Mrs. Leah Moore of Memphis, Tennessee. Not only did she speak well, but her personality was so charming that when she attempted to bring her address to a close, the audience insisted that she continue. What she had to tell was a true heart-story of obstacles overcome and success achieved in the face of great difficulties. Her description of her studio and the way it is conducted was an object-lesson of efficiency and service that was an inspiration in itself. Without a doubt, to George Harris belongs the credit of injecting "pep" into every man and woman present. He spoke forcefully, convincingly and helpfully. His remarks were pointed and some were a stinging rebuke to existing conditions; but they were kindly, and inspired his audience to look up instead of down. The keynote of his talks might be summed up that to the thinking photographer all things are possible; that without thought, no man in any field can achieve success. To Clifford Ruffner, editor of *Studio Light*, belonged the task to show how advertising could be made profitable in the studio, and he was able to do it clearly and thoroughly. His talk included a reference to the ethics of the profession as related to advertising, which was in harmony with the inspirational character of the entire convention. J. C. Abel, editor of *Abel's Photographic Weekly*, spoke on system and salesmanship, and their important influence in the studio. John Garo helped many an ambitious photographer by criticising prints from among those on exhibition. What finer spirit could be shown than to help others to achieve success. Those who were privileged to hear these speakers could not fail to return to their homes chastened, inspired and encouraged to put more into photography than ever before.

PICTURE-EXHIBITS

One of the features of the convention was the exceptional exhibition of pictures. Many remarked that it was even better than the one at the National Convention. Be that as it may, in the number of exhibits and the high quality of the workmanship it was equal, if not superior, to any picture-exhibits of previous conventions. No prizes, blue ribbons or salon-honors were awarded; but special certificates of appreciation were issued. Space will not permit a reference to the pictures themselves, but we record the names of those whose pictures were hung and admired.

Maine Exhibitors:—Hanson Studio, Portland; L. A. Luce, Farmington; A. T. Reynolds, Gardiner.

New Hampshire Exhibitors.—J. D. Hunting, North Conway; Kimball Studio, Concord; Wm. H. Manahan, Hillsboro; PHOTO-ERA MAGAZINE, Wolfeboro; C. E. Powers, Milford; Sawyer, Concord; Shorey Studio, Lancaster; A. R. Thurber, Claremont; Hallie Wilson, Berlin.

Vermont Exhibitor.—A. A. Bishop, Newport.

Massachusetts Exhibitors.—Bosworth Studio, Springfield; Jared Gardner, Plymouth; Eric Stahlberg, Northampton; C. W. Thumith, Newburyport.

Rhode Island Exhibitors.—G. H. Najarian, Woonsocket; Louis Oliver, Providence; Vandal Studio, Pawtucket.

Connecticut Exhibitors.—R. A. Gooch, Hartford; Seeley Studio, Bridgeport; G. E. Tingley, Mystic.

New York Exhibitors.—Philip Conklin, Troy; F. E. Geisler, New York; J. E. Mock, Rochester; Nicholas Murray, New York.

Miscellaneous Exhibitors.—Frank Scott Clark, Detroit, Mich.; Dupray & Colas, Montreal, Canada; C. G. Lewis, Toledo, Ohio; Will H. Towles, Washington, D.C.; C. H. Nakish, Sherbrooke, Canada.

Thanks to J. C. Abel, a splendid collection of pictures was shown as an international exhibit. Mr. Abel co-operated gladly with the picture-committee and obtained pictures from all parts of the United States, Canada, and Europe. In this beautiful exhibit were pictures by Marcus Adams, Bertram Park, A. Swan, Lionel Wood, Siemsen, Rudolf Duhrkoop, May L. Smith, J. Anthony Bill, A. Conkling, Ernest Valomer, Richard T. Dooner, F. J. Sippel, Balazs, Max Halberstadt, Gerhardt Sisters, William S. Ellis, Mock Studio, Clifford Norton, Wheeler, Angus Basil, George S. Ward, Elias S. Golden-sky, D. D. Spellman, Heyn & Keeley, J. Chircosta, L. L. Higginson and others.

MANUFACTURERS AND DEALERS

In the Maplewood Casino, across the street from the Maplewood Club, where all the demonstrations, addresses and entertainments were held, the manufacturers and dealers had space and provided an excellent display of what was new and of interest to the professional photographers. The following manufacturers, dealers and representatives were present:

Anseo Company, Binghamton, N.Y.; Paul True, Frank Hearn and L. D. Field.

Bausch & Lomb Optical Company, Rochester, N.Y.; E. A. Taylor.

Brieloff Manufacturing Company, New York City; J. Brieloff and J. T. Jaret.

Cramer Dry Plate Company, St. Louis, Mo.; Ralph B. Brackett.

A. M. Collins Manufacturing Company, Philadelphia, Pa.; Henry M. Sever.

Chilcothe Company, Cleveland, Ohio; E. N. Bridges, Defender Photo Supply Company, Rochester, N.Y.;

F. B. Newhall, E. H. Conliss, and A. E. Clark.

Eastman Kodak Company, Rochester, N.Y.; C. F. Ames, Arthur H. Paul, Henry M. Fell, Clifford Ruffner, W. L. Pierce, A. H. Bruce, H. A. Collings, H. F. Arnold, C. A. Nelson, D. N. Soderquist, Ira F. Lindsag, and H. T. Rydell.

J. S. Graham Company, Inc., Rochester, N.Y.; Grant Wilson.

Haloid Company, Rochester, N.Y.; F. W. Godfrey; Hammer Dry Plate Company, St. Louis, Mo.; C. Shafer.

E. N. Lodge Company, Columbus, Ohio; E. O. Wagner.

Medick-Barrows Company, Columbus, Ohio; R. H. Barrows.

Mueller Brothers and Manufacturing Co., Chicago, Ill.; Jos. E. Rea.

George Murphy, Inc., New York City; J. A. Murphy and C. R. Leake.

Pako Corporation, Minneapolis, Minn.; J. E. Reedy.

Reliable Photo-Mount Company, Springfield, Mass.; H. H. Hopkins.

Sprague-Hathaway Company, Somerville, Mass.; Philip Smith and Miss A. M. Cullin.

Robey-French Company, Boston, Mass.; Thomas Roberts, George A. McLaughlin, Fred Q. Avery,

M. W. Reed and H. W. Smith.

Springfield Photo-Mount Company, Springfield, Mass.; A. Webber.

Taprell-Loomis & Company, Chicago, Ill.; M. E. Sholl and J. C. Schultz.

Wollensak Optical Company, Rochester, N.Y.; S. L. Gates.

The photographic press was represented by *Abel's Photographic Weekly*, J. C. Abel, and by PHOTO-ERA MAGAZINE, A. H. Beardsley.

ENTERTAINMENTS

Much credit is due to the entertainment-committee, which obtained the services of Mr. Mulgrew, who with his assistants provided cabaret and vaudeville entertainments that were excellent and clean throughout. None of the city vaudeville-theatres could boast of any better talent than added to our enjoyment at Maplewood. Dancing in the ballroom followed each evening's performance. The annual baseball-game proved to be a thrilling athletic exhibition and it was a hard-fought battle which was not definitely won until the concluding inning of the game. The manufacturers were the victors over the photographers by the score of 15 to 11. Not the least enjoyable feature of the game was a constant flow of "remarks" from the spectators as how best to play the game. As for the poor umpire, his decisions brought down upon him the wrath of first one side, then the other. The banquet was the crowning social event of the convention and was held Thursday evening, September 21. Those who were present will not forget the gay colors of the grotesque paper headgear that all were wearing nor the ear-splitting noise made with the aid of special favors. Balloons furnished through the courtesy of the Wollensak Optical Company were floated and were thrown in all directions.

No formal speeches were made at the banquet. A word of welcome was spoken by a member of the New Hampshire delegation, Col. A. E. Dick, managing-director of the Maplewood Club, and Mr. Howard V. Dalton were extended a word of appreciation for their splendid co-operation in furnishing excellent accommodations and service. Amid great enthusiasm, a ring was presented to the President Louis Oliver for the exceptional service he had rendered the association and in appreciation of his efficient direction of the convention. In proof of this, he and the entire board were re-elected for 1923, and, according to latest reports, the convention in 1923 will be held at Maplewood.

IN CONCLUSION

As if not to be outdone by her reception, the good old Granite State bid us farewell, arrayed in all her exquisite coloring of field and forest. Through the autumn-sunshine we sped homeward; and as we turned for one last look to the Presidential Range in all its majestic grandeur, we resolved to keep our eyes ever turned upward to higher and better things. A. H. B.



CONVENTION GROUP AT THE MAPLEWOOD CLUB, MAPLEWOOD, NEW HAMPSHIRE

Scientific Research at Maplewood

A NEW ENGLAND PHOTOGRAPHERS' CONVENTION without the genial presence of "Joxie" Collings would be like a fine dish with the seasoning left out. Yes; the convention at Maplewood, N. H., was a complete success, for Joxie was there. One evening, immediately after dinner, a galaxy of intellectuals, including Joxie, gathered in the hotel-parlor and soon became engaged in a scientific discussion—the renaissance of the valetudinary image of a superannuated panchromatic plate. Joxie took a prominent part in the controversy, which, however, came to a sudden stop when the term, "intermolecular"—uttered somewhat ostentatiously by Mrs. B.—created consternation among the disputants, and a lingering doubt in the vigilant mind of Joxie, who promptly questioned the legitimacy of the word. Mrs. B. at once accepted the intimated challenge and, amid cries of "Consult the dictionary!" the discussion was suspended. A search of the elaborate book-case, however, failed to reveal the presence of such a book of reference. Encouraged by vociferate cries of "You'll find one in the office!" Mrs. B., escorted by the eager Joxie and followed by a number of literary aspirants, repaired to the hotel-office. Approaching the desk, with Mrs. B. at his side, Joxie addressed the clerk, a native youth of the district, in his characteristically deliberate, ministerial, but convincing way, "Encyclopedia for two, if you please!" The functionary behind the counter looked doubtful for the moment, hesitated briefly, then replied suavely, "Very sorry, Mr. Collings, we are out of them today; but we can serve you some fine, fresh clams just received from Portland."

W. A. F.

Cincinnati versus Boston

IN our June issue we spoke encouragingly of the efforts of the Cincinnati Reds to regain the National League championship which they won three years ago. They have not succeeded, but they occupy a position right next to the top, whereas the Boston Club is at the bottom of the entire list!

Incidentally, we referred to the reorganised Cin-

cinnati Camera Club and expressed the hope that it, too, would exert itself and help place its city prominently on the map. It certainly has made an auspicious beginning, with an admirable president and a well-equipped secretary who are doing things, and an exemplary house-organ, *The Developer*. This little publication is issued monthly, *i. e.*, once a month regularly, is ably edited and makes a fine impression. Its contents are interesting and attractive, and a credit to its editor and to the club. A selection from a summer-number is reprinted on page 233 of this issue. It may not be amiss for the Union Camera Club of Boston, and other camera clubs, as well, to "sit up and take notice," but, unless a monthly bulletin is gotten up well, is managed and edited by someone who has the necessary qualifications, and is in every way a creditable production, it might be better to dispense with it altogether. A camera club which is composed of workers of ability, artistic taste and general education surely can afford to publish a neat, dignified monthly sheet or folder indicative of its aims, activities and proficiency.

New Members for the A. C. C. of A.

RECENT additions to the membership of the Associated Camera Clubs of America are the Camera Club of Cincinnati, Ohio, with headquarters at the Arno Building, cor. Fourth and Sycamore Sts., Cincinnati, Ohio, and the San Diego (Calif.) Y. M. C. A. Camera Club.

The A. C. C. of A. Print Interchange, in charge of Mr. E. Roy Monroe, of the Portland (Me.) Camera Club, and the Lantern-Slide Interchange, with Mr. W. R. Frisbie, of the New Haven Camera Club, in charge, are now en route. Twenty clubs submitted sets of prints for the Print Interchange, and fifteen clubs sent in sets for the Slide Interchange.

The Cincinnati Camera Club, although one of the younger photographic organizations, is making considerable progress under the leadership of Charles H. Partington. *The Developer* is the club-paper and, from the contents, one will realise that its mission of "developing" is being achieved. Mr. G. A. Ginter is the editor, as well as secretary of the Camera Club of Cincinnati.



SEPTEMBER 21, 1922. PHOTOGRAPH BY A. A. NELSON, LACONIA, N. H.

Other club-papers issued by members of the A. C. C. of A. are *The Ground-Glass*, Newark Camera Club; *The View-Finder* of the California Camera Club; *The Accelerator*, of the Southern California Camera Club; *The Exposure*, of the Chicago Camera Club, and *Bulletins* by Orange, Elysian, Dallas and other clubs.

The Association to-day is comprised of thirty-four clubs in as many different cities. This list of members contains virtually all of the well-founded clubs in America who are co-operating for the promotion and cultivation of the science and art of photography.

LOUIS F. BUCHER, *Secretary*.

Calma Black-print Paper

THOSE of our readers who are interested in the making of photographs of furniture, machinery and other manufactured goods for salesmen's albums will be interested to know that Burke & James, Inc., 240 East Ontario Street, Chicago, have again placed Calma Black-Print Paper on the market. This is a non-baryta coated raw stock—chloro-gelatin developing-paper—coated with the standard Rexo emulsions in three grades, hard, normal and soft and in one surface, semi-mat. One dozen 8 x 10 size will be sent to any reader on receipt of twenty-five cents. Descriptive matter may be obtained at request.

Import Duties on Photographic Supplies

WE have received from the United States Tariff Commission a list of the duties assessed on photographic material and supplies under the tariff act of 1922, as follows:

- | | |
|--|----|
| "Par. 28. photographic chemicals . . . | 60 |
| per centum ad valorem and 7 cents per pound | |
| "Par. 228. photographic lenses . . . | 45 |
| per centum ad valorem. | |
| "Par. 1305. plain basic paper for albumenising, sensitising, baryta-coating, or for photographic processes by using solar or artificial light, 3 cents per pound and 15 per centum ad valorem; albumenised or sensitised paper or paper otherwise surface coated for | |

photographic purposes, 3 cents per pound and 20 per centum ad valorem;

"Par. 1433. Photographic cameras and parts thereof, not specially provided for, 20 per centum ad valorem; photographic dryplates, not specially provided for, 15 per centum ad valorem; photographic and motion-picture films, sensitised but not exposed or developed, four-tenths of one cent per linear foot of the standard width of one and three-eighths inches, and all other widths shall pay duty in equal proportion thereto."

Report of Kansas City Convention May 1, 2, 3, 4, 5 and 6, 1922

UNFORTUNATELY, a copy of "Minutes of Proceedings" of the Fortieth Annual Convention of the Photographers' Association of America, Kansas City, Missouri, arrived too late for mention in the October issue. However, it is never too late to give credit where credit is due. This year's report is similar to the one of last year in form. If anything, the paper and typography are better. It contains ten portraits from the general exhibit which were selected by a jury composed of Howard D. Beach, Buffalo, New York; O. C. Conkling, St. Louis, Missouri, and Carl Gist, St. Joseph, Missouri. They are superb examples of portraiture and all have been admirably half-toned and printed, each occupying a full page. They are by the following-named artists: A. H. Diehl, M. A. Grady, G. L. Hostetler (president of the Association), J. Kennedy, Willis McCrary, E. L. Mix, Carle Semon, Walter Scott Shinn, J. W. Smith, Orran Jack Turner.

The volume of one hundred and seventy-five pages includes a verbatim report of the proceedings of each session and demonstration, treasurer's report, constitution and by-laws of the P. A. of A., Code of Ethics, Honor Roll of members whose pictures were accepted and hung, list of exhibits from American and foreign associations, names of past presidents of the association, list of honorary, life, active, associate and commercial members, and twenty-six pages of advertising. It is a volume that displays excellent editorial and typographical taste, and those who had the responsibility of its publication may well feel proud of it.



ANSWERS TO QUERIES



E. B. C.—To photograph a person or an object surreptitiously—i.e., without the knowledge of the parties directly interested, can be accomplished in several ways. A very successful one is to pretend to photograph something situated at right angles to the actual object of interest, but by having a finder adjusted in such a way as to present a good image of the latter (at the photographer's right or left), really making a picture of the unsuspecting object of personal interest. A camera of the box-type can be easily camouflaged by attaching a small dummy lens to either side of the camera and directing that side to some ostensible object of interest, while directing the actual front of the camera with the finder towards the real object of interest, and photographing it.

A. S. D.—A hand-camera has a great advantage over a view-camera when used in a steamer, as the ship itself may be vibrating under the stress of its engines, and a stand or tripod will communicate the vibrations to the apparatus, and blurred pictures will almost always be the result. If you hold the camera in the hand, the legs and body will so far deaden the vibration that it ceases to be troublesome. It is worth noting that different parts of the vessel differ very considerably in the matter of vibration. Anywhere at the stern of a screw-steamer is much more marked than it is amidships or forward. Try a number of different places and select the one where seems to be the least vibration.

V. A. J.—Most developers oxidise and darken in the light and air, some of them more than others, and much more rapidly in solution than in a dry state. This accounts for the use of orange-glass bottles, paraffined stoppers, and sulphites and acids as preservatives in solutions. It is a wise precaution to keep solutions in orange-glass bottles, as well as the dry developer itself, or else to store it in a dark place. Pyro discolors rapidly in solution unless preserved under as nearly perfect conditions as possible. There seems to be a growing belief that potassium metabisulphite is the best preservative. Hydroquinone keeps well in solution, as does metol in the presence of alkaline sulphites. In a solid state, metol keeps indefinitely. Potassium metabisulphite crystals oxidise upon exposure to air, although more slowly than sulphites. In doing so a white powder forms on the crystals, which should be removed before they are used. The salt should have a strong sulphurous odor.

M. B. C.—The choice of a lens depends on the character of the work in which you specialise or upon which you think of concentrating. If you do much portraiture or landscape work a convertible anastigmat should be preferred, in our opinion; but if your fancy is for high-speed photography or architecture you might find that a more rapid anastigmat was of greater utility. The experience obtained with the outfit you have ought to give you a more reliable indication of your requirements than we could possibly do in answer to a letter from a worker whose tastes we do not know.

J. H. H.—A camera may be taken into the theater but not used, except with the expressed permission of the manager or proprietor. The price

of the ticket permits the patron to enjoy the show or to photograph a friend in the lobby (by daylight), but entitles him to no other privileges such as making pictures of the actors, any part of the performance, or even of any part of the theater, on account of the copyright laws, even if he were to make no commercial use of the negatives. An understanding with the manager, however, might lead to permission to do any of the usually forbidden things. Surreptitious photography, however, might be detected and lead to unpleasant consequences.

J. H. H.—Cameras and lenses may be insured against fire and theft, like musical instruments, or anything else that is left in the house or is carried about when in use. Ask your insurance-agent.



Phosphorescent Light in the Stop-Bath

SOME time ago I was doing some developing with Graflex Contrast Developer. I was developing Graflex plates, and as I rinsed the plates off in the Acetic Acid Stop Bath, I was very much surprised to see a very beautiful phosphorescent light illuminate the entire plate. I wrote to a well-known manufacturer for an explanation; he only advised me not to use a stop-bath.

Recently, I was experimenting with a Snapshot developer recommended some years ago. As I always use an acid stop-bath for either plates or films, I was very much surprised to note that the same phenomenon occurred with the roll of film. The formula for the developer is:

(A)	
Pyro.....	90 gr.
Potassium Metabisulphite.....	20 gr.
Water.....	20 oz.
(B)	
Sodium Carbonate.....	3½ oz.
Sodium Sulphite.....	1 oz.
Water.....	20 oz.

The acid stop-bath was made by taking one ounce of No. 8 (28%) acetic acid to about 15 ounces of water. The film used was a V. P. Eastman Kodak Film.

If in your experience, you have run across a similar case, I would appreciate an explanation of this curious sight. I am very sure that it is not due to unclean conditions. I have never noticed anything like this before when using other plates and other developers.

J. H. KLANCKE.

[Mr. Klancke's experience is a common one among certain workers. When, immediately after (pyro-soda) development, and without rinsing, the plate is immersed in a stop-bath or a strong solution of alum—both of which are strongly acid—the sudden reaction produces a phosphorescent flash, which often fogs the negative. Washing away all remains of the (alkaline) developer adhering to the plate, before placing it in one of the above-mentioned solutions, will prevent phosphorescence.—EDITOR.]



LONDON LETTER

CARINE AND WILL CADBY



DURING a somewhat protracted and thorough tour around the Grisons district of Switzerland, we have discovered a rather interesting photographic evolution relating to the people who practise our art here. This part of the country is well known for its majestic mountains, blue lakes, foaming torrents and ideal villages in the high flower-strewn valleys. There are a good number of centers of attraction or, to use the advertisement-expression, "beauty-spots", and we noticed that each center possessed a professional photographer who devoted his entire energies to landscape-work. There are no portraits of humans to be seen in the shop-windows; but every conceivable aspect and mood of the mountains, at all seasons of the year, was portrayed.

Now this close association with Nature, this incessant study of the Alpine landscape, which of necessity often meant long and difficult tramps, and sleeping in mountain-huts, has developed in the photographers who live here not only a keen appreciation of light and shade, but the power to express it in a black-and-white medium; for much of their work is of very high artistic quality. Naturally, they all produce the usual crop of "pot-boilers"; sound and popular, merely ordinary views of the villages they live in, that appear as picture-post-cards, and, as such, have a great sale. But we do not refer to these. If we penetrate right to the back of the shop, and get into sympathetic conversation with the photographer, we are sure to be shown a portfolio of a very different description. There will be realistic suggestions of such subjects as a storm brewing; a still, evening lake-scene; a study of weather-beaten firs, framing a glimpse of snow-peaks. Or, if we come to his winter-pictures, there is the snow in all its endless variety and beauty, treated so pictorially that many of these photographs would certainly be accepted by our leading exhibitions if they only found their way before the judging-committees.

But the interesting thing about this development of the perception of beauty by these Swiss photographers is that each produces a different interpretation, according, we presume, to his particular individuality and environment. There is, for instance, Steiner at St. Moritz, who, having discovered the all-important influence of lighting, carries his work so far in this direction that he seems able to compose a picture out of any odd thing in the mountains, relying entirely on the play of the light for his effect. Gyger of Adelsboden fame has mastered the difficult problem of making winter-ports photographs pictorial. The snow, flying high from the fast running ski, sounds all right; but by no one but Gyger have we seen a really good rendering of it. And so on through the list; and we can only conclude that photographic education in the mountain-comes quickly and comes right.

This has been a most disappointing summer for photography on account of the weather, at home and abroad. We have heard sad tales from England of holidays spent without exposing a single plate, and of others where hopes ran high of obtaining masterpieces for the exhibitions, only to be dashed by floods of rain. We, ourselves, over here in Switzerland, have had an unprecedented run of ill luck so far as photography

has been concerned. We, too, had started out with high hopes and the intention of getting photographs to illustrate a little book we are writing about the Grisons. Every place we visited, we had determined should not only be truthfully and accurately described, but it should be photographed in the same spirit. We were not going to be led away to attempt any novel or pictorial rendering which might obscure or flatter the subject; but our photograph should be a plain statement of facts. These were our plans; but the weather willed otherwise. At first, we were patient and waited not only for fine weather, but for the right lighting at certain times of day; but as our time grew short and the weather worse each week, we asked much less of fate and were only too glad to obtain anything in the way of a view. Sometimes, even this failed; and we had to leave a picturesque village with all the conditions except sunshine, that would have made a good photograph and without exposing a plate, and having to content ourselves with a view from the local photographer.

Had it not been for laments from fellow-photographers, we should have believed ourselves pursued by a relentless and spiteful fate. It was nothing to take the train, or tramp hours to a certain spot in the heat of the day, only to find on our arrival that the sun had grown tired of shining, and for the rest of our vigil was sulking behind gloomy clouds. Often, it added the last ironical touch by coming out again in full splendor as soon as we had exposed all our plates.

Certainly, one afternoon we seemed to be having an amazing stroke of luck. We found a native fisherman angling in a foaming torrent amid wild crags with a background of waterfalls and peaks. Also our camera caught him just when he had caught a fish. But fate was only mocking us, for when we were developing that evening, the ghastly fact was discovered that the fisherman and his newly-caught fish were mixed up on the plate with an idyllic village on a hill which with many struggles and waits we had photographed that morning!

As far as weather was concerned, things went from bad to worse, and we have never known the sun so fickle in Switzerland. As a rule, our English gray days are unknown and the good actinic light over here is appreciated by all photographers. This summer the weather has been awry all over Europe and, as some of our amateur politicians would say, will be, until America steps in and takes a hand in the game.

Some progressive Swiss hotel-keepers are discussing the organization of a big photographic competition to be held over here in the winter-season, the prizes for which will consist of free board and lodging at the hotel where the competitor is staying. It is an original and very practical idea, and there will be every incentive to use a camera with taste and intelligence. The details have not yet been worked out; but we hear that there are to be plenty of prizes and one or two dates for judging.

Evidences of the London Salon have reached us here and we have seen a reproduction of an excellent portrait exhibited there of Lord Grey of Fallodon, in an

(Continued on Page 180.)



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

MAKING YOUR CAMERA PAY, by Frederick C. Davis. 96 pages. Price, cloth \$1.00. New York: Robert M. McBride & Company.

Readers of PHOTO-ERA MAGAZINE will recall the series of practical articles, "Selling Your Photographs," by Frederick C. Davis, which appeared during 1921 and 1922. These articles proved to be so helpful that a demand for them virtually exhausted the supply of back numbers of the magazine. In view of their popularity, it was decided to issue the articles in book-form under the title "Making Your Camera Pay". This has been done, and the result is a neat, well-printed little book of practical information which tells the reader in an interesting way what to photograph and what not to photograph, the kind of pictures editors want and why, analyses available markets and stimulates the camerist to put more into his photographic work and thus derive greater pleasure and profits therefrom. Whether the reader is interested in the subject as a possible source of livelihood or whether he wishes to find a way to finance his photographic hobby, in either case, the little book will be found a practical and very helpful answer to the question how to earn money with a camera.



This Month's Contributing Critics

SELDOM have our assistant-editors—the Contributing Critics—acquitted themselves so brilliantly as in the current issue in analysing and criticising Dr. Rohdenburg's marine. Between them, they have presented the merits and faults with rare insight, frankness and consideration, and have suggested easy means whereby the picture may be materially improved. The critic whose words of reproof and counsel head the list is an able and successful professional photographer and, unlike the average craftsman who airs his opinions in print, he shows not only a clear comprehension of the rules of pictorial composition, but an unusual capacity for correctness, clearness and facility in expression. This is the first and also welcome appearance of Mr. Leeds as one of Our Contributing Critics.

A. L. Overton, whose name is familiar to our readers as a writer for this department, again shows his ability to appreciate the subtlety and ambiguity of a composition which invites contemplation and speculation, and tests the beholder's critical faculty.

E. L. C. Morse is not to be trifled with in matters of serious criticism. He is not only a technical expert in photography, but a fearless, honest and constructive critic. He is a valued member of the Chicago Camera Club and, by profession, instructor in modern languages. His refreshingly frank opinions are as valuable as they are welcome to these columns.

William S. Davis is a well-known figure in PHOTO-ERA MAGAZINE as a writer, illustrator and pictorial competitor. He is a recognised authority in matters of art and, by profession, a marine-painter with photographic writing as a profitable sideline. Appreciating the educational value of O. C. C. department, Mr. Davis has been pleased to send, for the first time, his opinion of a picture offered for public criticism in this magazine. It will be read with interest and respect.

The other three critics are amateur workers, pure and simple. With the exception of Dr. Adair, they are frequent contributors. They, too, show a fine sense of discrimination in matters of composition, technique and pictorial beauty, and manifest a sincere desire to be of service in the cause of artistic picture-making. We are sure that the efforts of these and the other Contributing Critics are deeply appreciated by PHOTO-ERA's thoughtful readers.

W. A. F.

Prompt Service Assured

We have been informed that Howland & Dewey Company (Eastman Kodak Company), 545 Market Street, San Francisco, California, have been appointed wholesale distributors of the McMurtry Photo-Meter in the exclusive territory of California, Arizona, Nevada and Oregon. All dealers in these states will be supplied by the Howland & Dewey Company. In the east, Pinkham & Smith Company, 292 Boylston Street, Boston, Massachusetts, will supply dealers. McMurtry & Company 4133 Kenmore Avenue, Chicago, Illinois, will be glad to hear from reliable dealers who have wholesale distributing facilities for this photo-meter in exclusive territory still open in the United States.

The Toronto Camera Club

THE club-year of the Toronto Camera Club, Toronto, Canada, ended September 30, 1922; and, according to its secretary, Mr. Russ M. Collins, the year has been marked by increased activities which have included exceptionally interesting and beautiful exhibitions. Moreover, the club-membership has increased steadily. During October a lantern-slide exhibition, with prizes, demonstrations, the annual meeting, a talk by Mr. Charles Aylett, lately returned from England, on soft-focus lens-work, and competition with prizes for landscapes, marines, portraits, genres, architectural subjects and for novices occupied the attention of the members. The club is flourishing and it hopes to increase its service to members and to the community.

London Letter

(Continued from preceding page)

illustrated paper. Our readers have probably heard of the opening of the Salon by now, and as we are shortly to leave for England, we shall be able to refer to the pictures in our next letter.

Our summer-book on the Bernese Oberland, published on this side of the Atlantic last spring by Messrs. Mills and Boon, is to be issued in the States by Messrs. Dutton. As it is copiously illustrated by photography, we may, perhaps, be pardoned for mentioning it in these notes; and, if it is the means of directing the footsteps of Americans to this wonderful and pictorial little holiday-country, it will have achieved its purpose, for we are sure that they will not regret their coming.



UNDER THE OAKS
PHIL M. RILEY



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Winter Camera-Joys in New Hampshire

PHIL M. RILEY



WE HAVE been born and bred in New Hampshire, is to long to return there often, if business or other reasons have made necessary a residence elsewhere. Native sons and daughters ever remain loyal to their birth-place wherever fortune leads them; for the homing appeal of the "Granite State" is irresistible.

Old-Home Week and the summer-vacation period satisfy to a degree that "back to the old homestead" longing. And to the nature-lover, and especially to the amateur photographer, they are a delight, indeed. For New Hampshire boasts much more of beauty and interest than her celebrated granite hills. Although comprising less than one three-hundredth part of the area of the United States, it is one of the greatest year-around playgrounds of the nation. Few equally restricted areas, anywhere, contain as much and as varied picturesque beauty, scenic grandeur and recreation appeal.

Of seacoast, mountains, lakes, rivers, towns, countryside and highways, New Hampshire has an abundance of the best. Her seacoast, rock-bound and sand-girt, makes up in varied beauty what it lacks in length: her White Mountains, sightly and rugged, rise to heights nowhere exceeded in the eastern part of the United States, except in North Carolina; her many tree-framed lakes and ponds, set among verdant hills and overshadowed by higher mountains, amply justify the term, sometimes used, "Switzerland of America"; her innumerable rivers and streams range from the lordly Connecticut, Merrimac and Piscataqua to myriad little mountain-and-pasture brooks which are at once the camerist's and fisherman's delight; her cities and towns, hives of industry or trading-centers, are neat, progressive and attractive in their streets, homes and public buildings; her countryside, where farming and lumbering hold sway, lacks little of the pastoral quiet and simplicity which so attract the tourist

in England; her highways, ever increasing in total improved mileage, enable the visitor within her borders to motor from one attraction to another with the greatest ease and pleasure.

Altogether, New Hampshire is a veritable wonderland to call home, offering as it does virtually every form of recreation and natural scenery to the lover of the great outdoors. It is beautiful at every season of the year; charming when lilac, cherry and apple-blossoms perfume the spring-sunshine; winning when gentle summer-breezes wave through the buttercups and daisies in the hayfields; glorious when the foliage with the apple turns to golden and red at the time of the harvest; chaste, fantastic and mysterious when winter has laid her mantle of white over hill and dale, forest and farmhouse.

As a refreshing change from the usual summer-outing, an occasional winter-vacation with its attendant outdoor-sports, recreations and tramps afield in the clear, dry, frosty air of the snow-clad New Hampshire country, inhaling the aromatic fragrance of the fir, pine and hemlock, restores failing appetites, steadies jumping nerves, deepens breathing, stimulates circulation, puts the ruddy glow of health into pale cheeks, and through its general tonic-effect soon returns the visitor to the city fit and ready for work again. Even a week-end trip back to the old farm or small-town home is not only beneficial, replete with happy recollections of childhood-days and productive of many photographs worth while, but a joyous experience not soon to be forgotten.

Outdoor-photography in winter is as easy as in summer, and the opportunities are fully as numerous and as beautiful. It is in the country that winter-snows retain their beauty. In the city, snow soon becomes a dirty nuisance, but in the clear, cold, country-air, little affected by smoke or traffic, it remains for months a glorious mantle of white, sparkling in the sunshine.

Picture-subjects in great variety abound in



DECEMBER SUNSHINE

PHIL M. RILEY

the thriving towns, sleepy villages, isolated farming-districts and mountain-woodlands; over the white-robed and evergreen-draped hills; along ice-bound brooks and partly open, inky-looking rivers; throughout the snow-clad countryside. Nature, everywhere, provides a wealth of landscape-material and chiaroscuro-effect.

If genre-studies are preferred, much of interest is to be found in picturing lumbering-operations, wood- and ice-cutting, and maple-sugaring in March. Such sports and recreations as sleighing, coasting, snowshoeing, skating, hockey, mountain-climbing, hunting and trapping, which are to be found and enjoyed almost anywhere in New Hampshire, are productive of many attractive photographs. To these may be added fishing through the ice and horse-racing on the lakes of central New Hampshire, also such sports as tobogganing, ski-jumping, curling and the like, which, with winter-sports generally, are practised with increasing popularity at Conway and Intervale, the gateway to the White Mountains; Hanover, the seat of Dartmouth College; Durham, where the state agricultural college is situated; Exeter, the home of a famous preparatory school, Newport and Wolfeboro. At

North Conway, Hanover and Newport there is every year what may be called a winter-carnival.

New Hampshire towns have their attractive winter-pictures no less than the country, especially soon after a storm. Notable among them may be mentioned street-scenes, river-shores, bridges, residences and public buildings, especially churches, all of which assume different aspects of beauty when they are snow covered.

Although the writer very naturally sings the praises of his "old New Hampshire home," any camerist desirous of an active winter-vacation in the country will find similar conditions anywhere in northern New England, New York, Wisconsin, Minnesota and the far Northwest. All have their winter-resorts where bracing and enjoyable outings may be had with the customary sports and recreations, and many unusual and beautiful photographs may be obtained. Numerous hotels and boarding houses at various points in the lake- and mountain-country are open the year around, the rates being much lower in winter than in summer.

A good old-fashioned snowstorm, welcomed by all camerists on the lookout for variety in picture-material, is the signal for a pilgrimage

to the north country. And wherever one goes in returning to the neighborhood of his early home, photographic conditions and procedure will be much the same. If any camerist thinks that during summer-vacations he has photographed all the scenes of his childhood that are worth while, let him return again in winter and undeceive himself. He will find an entirely new world awaiting him, clean, white-robed and silent except for the murmuring trees, and with the

objects upon which there is a delicate play of light and shadow reminiscent in its daintiness of a rare and costly Japanese print.

The essential qualities to strive for in a winter-photograph are snow-texture, shadow-detail and no increase of the characteristically strong contrasts of the subject. These necessary qualities are obtained by careful relative adjustment of lighting, exposure and development. A photograph of snow is said to have texture when one



FANTASTIC SHADOWS

PHIL M. RILEY

added charm of a low sun that casts long shadows across the snow the transformation is as complete as it is wonderful. Snow is a magic wonder-worker that imparts a different aspect, fantastic outlines and new interest to familiar objects of every sort, often lending picturesque attraction to scenes possessed of no beauty whatever before the storm provided the proper background.

Winter-scenes in both town and country have a pleasingly bold simplicity which is altogether refreshing after photographing spring, summer and autumn-subjects, so rich in minute detail. A mantle of white conceals countless little objects, covering them with a gently undulating surface of snow on which every footprint, track and tree-shadow is conspicuous, and against which every object, usually being considerably darker, stands forth prominently. In general, winter-pictures are forceful and sparkling, frequently quite contrasty, although occasionally one is seen that comprises nothing but snow or snow-covered

can see the rough, flaky formation of its surface, the effects of wind upon it, and the footprints, tracks and other depressions which make one almost imagine that he can extend his hand and feel its chilly dampness. Blank, white paper in a photograph does not represent snow, for a snow-covered surface possesses light, shadow and detail.

Upon the lighting of the scene depends the delicacy of a picture's beauty, especially in winter. The forms and directions of foreground-shadows on the snow are of great importance. Often, they furnish the motive of a picture, or, when lying diagonally across the picture-space instead of vertically or horizontally they lead up to and emphasise the chief object of the picture. Selecting the right viewpoint and time of day to produce such effects obtain the best lighting by placing the sun to the left or right and in front of or behind the camera. The latter is usually preferable, because the direction of light is such as to place trees and other objects partly in

sunlight and partly in shadow, giving better relief and stereoscopic effect. With the sun directly behind the camera, the lighting is too flat, shadows are inconspicuous and foregrounds uninteresting. When working against the light the objects casting prominent foreground shadows must form the chief interest of the picture. In such cases the sun itself must be excluded from the picture and it is well to shade the lens with a hat from strong overhead light-fog.

As in most branches of photography, correct exposure is the principal secret of success; and, strange as it may seem, underexposure is the chief danger to be avoided. In pleasant weather the light, although lower and hence yellower than at the same hour in summer, is rendered more effective than would otherwise be the case by the white snow, which usually fills such a large part of the picture-space. Reflection from this white surface is much greater than from bare ground or grass in summer and assists considerably in lighting the darker objects, and shadows on the snow, owing to their bluish color, are far more actinic than corresponding shadows at other seasons of the year. One distinct advantage of the low sun in winter-photography is the fact that even at noonday the light is never too high to cast those long, sprawling shadows so essential to pictorial effect in snow-covered landscapes. For about two hours in the middle of the day, exposures for snow-scenes average approximately the same as for similar subjects in summer; but they must be increased more rapidly during the early morning and late afternoon-hours.

For a better understanding of winter-exposures that are possible, picture-subjects may be divided conveniently into four classes. First, there is the average snow-scene with no prominent objects other than snow nearer than the middle-distance, and with medium contrast which will be pleasing in the photograph if accurately reproduced. Were it not for the snow, the light of the low, yellow sun would necessitate an exposure four times longer than for the same view in midsummer. White snow, however, decreases exposure about one-fourth, bringing the actual time back to nearly the same as in summer for about two hours in the middle of the day, when 1/50 second at F/8, U.S. 4 stop, is about right. Underexposure is the most frequent fault to guard against; the fault which, with consequent forced development to obtain detail in shadows and dark objects, results in white paper rather than snow-texture in the print.

The second class includes scenes bathed in sunshine after a storm, when the trees and other objects are covered with snow or frost encrusted and foregrounds are light in tone. Exposures

may be about one-half those in the first class, or 1/50 second at F/11, U.S. 8 stop, for two hours during the middle of the day, earlier and later hours to be handled accordingly.

The third class consists of open snow-scenes without foreground—wide country-views in which New Hampshire abounds. They have relatively little strong contrast, all dark objects are at a distance, ample detail is important and great care must be taken to avoid flatness and lack of sparkle. Correct exposure is essential, any error tending better toward slight under rather than overexposure in order to retain and if possible increase contrast. The actual time will average about one-fourth that for the first class, or 1/50 second at F/16, U.S. stop 16, during the middle of the day; at other hours the time should be increased accordingly.

As large lens-apertures tend to decrease contrast, small apertures to increase it, the wiser course is to use a smaller stop in the second and third classes rather than to increase the shutter speed, as all the natural contrast in such scenes is usually wanted in the picture.

The fourth class embraces all views with strong foregrounds in which there is extreme contrast between dark nearby objects and the surrounding brightly-lighted snow. In views of this sort the influence of snow is less marked than in the foregoing classes, and exposure must be given more nearly in accordance with the light-conditions that prevail during the winter-months, although dark objects near the ground may be brightened somewhat more by reflection from the snow than from the bare ground or grass when making a picture in summer.

The problem is to obtain sufficient detail in foreground-objects and shadows while still retaining texture and gradation in the snow. Natural contrast must be reduced if possible, not increased, and it is well-known that long exposures tend to decrease contrast, short exposures to increase it. Full exposures must therefore be given, any error tending toward over rather than underexposure. This can be done only by following that old and well-known rule: "Expose for the shadows and develop for the highlights." In other words, sufficient exposure must be given for the darkest object or shadow in which detail is wanted, and then, in order to prevent too great density and consequent lack of detail and gradation in the highlights, it must be decided when to stop development by inspection of the highlights rather than of the shadows, as is the usual practice. If slow tank-development be chosen, slight if any modification is required, except in extreme cases, when the total time of development may be slightly



THE HOUSE OVER THE HILL.



PHIL. M. RILEY

A WOODLAND ROAD

shortened—possibly one-fourth. For this class of views exposures from two to four times those for the first class must be given, or 1/25 to 1/10 second at F/8, U.S. 4 stop, during the middle of the day, other hours accordingly.

In each of the foregoing classes the exposures mentioned are for the hours of 11 A.M. to 1 P.M. in sunshine. Earlier in the morning and later in the afternoon the light of the low sun is yellow and exposures for all subjects must be rapidly increased up to four times or more according to the hour. At 10 A.M. and 2 P.M. they must be increased 50 per cent. At 9 A.M. and 3 P.M. they must be doubled, and at 8 A.M. and 4 P.M. they must be quadrupled. At high mountain altitudes underexposure is seldom to be feared. Above-timberline exposures may often be only one-fourth of those for the same hour in the valleys below.

In working against the light—that is to say, pointing the camera toward the sun—when making such views as are included in classes one and four, the proper exposure for the subject and hour must be trebled in order to obtain adequate shadow-detail.

Although ordinary winter-views are at their best in sunshine, interesting pictorial effects are also seen in snowstorms and on misty days during spring-thaws and warm rains, although the skill of the camerist may be severely taxed to photograph them satisfactorily. Puddles of slush in the streets and reflections in wet, bare spots on the sidewalks often lend interesting detail and variety of tone to the foreground that are much more attractive in the picture than in actuality. Mist, when not too thick, idealises and puts atmosphere into commonplace views, softening outlines, subduing obtrusive detail, differentiating planes, giving breadth to the entire effect and background-quality to the distance.

Whatever the subject and hour of the day there must also be exposure increases for any weather-condition other than bright sunshine. Double the exposure is required if the sun is obscured by light clouds or mist, but if the light is fairly bright; treble exposure if the sky is gray and the light rather dull; quadruple exposure on dark days when there are heavy clouds and very dull light, or it is foggy or snowing. The slow exposure will record the movement of snowflakes before a darker background of trees or buildings, showing them as slightly blurred streaks rather than clear dots and simulating their driving swirl in a storm more realistically than would an exposure short enough to "stop" their motion.

All of the exposures quoted above presume the use of films or plates of average rapidity, such as Kodak film, for example. Both roll and pack-

films are orthochromatic and also non-halation because of their thinness and black paper backing, qualities of the sensitive surface needed in photographing snow-scenes. If dry-plates are used they should be orthochromatic and double coated in order to prevent halation due to the strong contrasts presented by snow-scenes. The subtle beauty of snow-foregrounds cannot be preserved unless all the delicate gradations of tone are correctly rendered and these are chiefly in white and blue, both almost equally active photographically. Unless an orthochromatic film or plate be used, the blue shadows and also the blue sky will be recorded much lighter than they appear to the human eye.

These materials properly used will give satisfaction, although results can be improved by the use of a color-filter placed over the lens in order to filter out the over-actinic blue-violet rays of light to which films and plates are super-sensitive and which are very noticeable in snow-shadows. Notably improved gradation and color-values are the rewards for use of a color-filter. This is particularly true in obtaining adequate foreground-detail in snow-covered landscapes, so essential to pictorial effect. Shadows of trees, paths, and other objects, for example, when quite strong because of bright sun, are pleasingly recorded by ordinary photographic methods. Owing, however, to the highly actinic quality of snow-shadows, they will not, if faint, record with sufficient prominence unless a color-filter is used to increase considerably the contrast between the sunlight and shadows.

Both orthochromatic films or plates and a color-filter, used separately or in conjunction, improve skies, tending to a greater or lesser extent to render blue sky as a gray tone rather than white and to register any existing cloud-formations. The latter, however, are not especially desirable unless in harmony with the scene—light for newly fallen dry snow; low tones for wet snow and slush; bold, rolling clouds, suggesting motion, for windswept snow.

The successful development of snow-scene pictures is a delicate matter that requires care and judgment, the principal danger being too great density in the highlights with consequent loss of detail and gradation in the snow-areas of the picture. Detail, texture and gradation, or variety of tones, are as desirable in the snow as in other darker objects. A negative filled with detail in both highlights and shadows, pleasingly snappy, but having no extreme density, is the ideal. Development must not be carried too far and the solution should be a dilute one.

Fifteen to twenty or even thirty-minute tank or tray development is highly desirable whether



OVER THE HILLS AND FAR AWAY

PHIL M. RILEY

dry-plates, roll or pack-films are employed. In the case of double-coated non-halation plates the highlights are not brought by development down to the back of the glass, so that density cannot be judged by inspection and either tank or factorial development must be adopted. Most of the standard clear-working developers which do not cause fog in dilute solution may be used with satisfaction. Pyro and glycin probably take the lead. Formulæ are unnecessary here as they are supplied by the manufacturers of most every kind of plates, films and developers.

The photography of winter-sports is more difficult than of ordinary snow-scenes or of summer-sports because of the rapid movements of the participants and the lower and less actinic light of winter. Although a reflecting type of camera, a rapid lens and focal-plane shutter are necessary in order to picture everything this varied and absorbing field offers, it is amazing how many subjects can be photographed successfully with ordinary hand-camera equipment. The difficulty is with a shutter-speed fast enough to avoid blur in the moving figures to admit enough light to the plate or film to record suffi-

cient detail. It is the desire to photograph rapidly moving objects at short range which renders the work difficult and makes special equipment necessary. If one be content to use an ordinary hand-camera at a distance sufficient to ensure sharp delineation of moving objects with the shutter-speeds available, detailful negatives will be had which, when skillfully enlarged two diameters on bromide paper and trimmed down to make the figures larger in the picture-space, lack little if anything of the quality of contact prints. With shutter-speeds of 1/50 and 1/100 second and a lens working at F 6.3, the milder winter-sports, such as snow-shoeing, skiing, skating, sleighing and coasting, will give no trouble. The more strenuous sports, such as ice-boating, ski-jumping, tobogganing and hockey, may also be photographed successfully at 1/100 second in bright sunlight provided the figures, not nearer than 50 feet, are approaching or receding from the camera directly, or at an angle of 45 degrees rather than passing in front of the camera at right angles.

Objects usually look best if pictured while approaching at 45 degrees, when they require

twice the exposure which would be given for the same objects at the same distance coming directly toward the camera, as compared with three times that exposure when passing at right angles to the camera. In most sports, too, there are instants when there is relatively little actual motion, although the effect of motion is apparent. Such times should be watched for and made the most of in photographing sports.

If moving objects are not hair-sharp in the picture, yet reasonably well defined, the effect of motion may be the better suggested, for mere

and long immersion in it does not stain nor fog the film or plate as other developers sometimes do.

Winter-scenes are more realistic when printed in black and white, as the snow is accurately pictured and the drab colors of most other less important objects at this season of the year are well represented by various tones of gray. Gaslight papers, therefore, are indicated for contact prints, bromide papers for enlargements. Both are to be had in various weights, surfaces and grades. There is a right grade and surface for every negative. In general, medium and



AT THE END OF THE ROAD

PHIL M. RILEY

suspended animation does not simulate motion. To obtain a semblance of life, action and the spirit of the sport depicted, much depends upon getting the right viewpoint and instant of exposure. In coasting, tobogganing and ski-jumping pictures, the viewpoint should be such that motion seems inevitable because of the steepness of the slope. The position of the arms and legs and the leaning of the body, as of a skater making a turn or doing a spiral, are of assistance; likewise flying snow from a sled rounding a turn or the pennant streaming backward from an ice-boat with its windward runner in air.

The treatment generally prescribed for underexposures is indicated in developing winter-sports negatives. Thirty-minute tank or tray development with a weak pyro, glycin or other clear-working developer can hardly be excelled, as the slow action of the weak solution gives opportunity for shadow-detail to develop before the highlights have become too dense. Glycin is perhaps the best of all tank-developers for extreme underexposures, for it is clear-working

soft grades are preferable; contrast papers should usually be avoided, as most winter-negatives have enough snap without their use. Contact bromide prints from very contrasty negatives are sometimes more satisfactory than anything to be obtained on soft gaslight-paper. A mat-surface paper gives better snow-texture than smooth, and glossy papers should be avoided except for reproduction-purposes. The larger the print, the coarser the grain of the paper may be, rough surfaces being preferable for enlargements above two diameters and larger than 8 x 10.

Metol-hydroquinone, according to the paper-manufacturer's formula, can hardly be excelled as a developer for both gaslight and bromide papers. Particular care must be taken regarding the amount of potassium bromide included. There should be enough to prevent muddy whites, but not enough to produce greenish or brownish grays and blacks; cold, carbon tones are the aim in all reproductions of snow-scenes.

Mounting-papers for winter-pictures may be white, gray or black according to the subject

and effect desired, the first and the last, very rarely, however. Grays are usually preferable and may range from very light to very dark as needed to emphasise the important characteristics of the picture, light tones tending to decrease the apparent whiteness of the snow and contrast of the picture, and dark tones tending to increase them. Bluish grays are more useful than brownish grays because of the characteristic blue snow-shadows, except in pictures of melting snow with strong sunlight-effects, few

shadows and often patches of bare ground, when more warmth in the mount is desirable.

In a sentence, the essentials of successful snow-photography are to use orthochromatic films or plates and a color-filter, to expose amply for the poor light of winter and dark objects in the picture; to develop carefully in order to avoid great density and loss of snow-detail and gradation; and to print on medium or soft gaslight or bromide paper which will retain the full gradation of the negative.

The Silent Detective

WILFRED A. FRENCH, PH.D.



F Jules Verne had wished to extend his series of thrilling adventures in the realm of fiction, he might have written a romance founded on feats in photography. Or, had Daguerre been gifted with a versatile imagination, like that of the famous French romancer, he might have prepared a list of uses to which photography could be applied. To-day, there is scarcely an art, science or industry that does not, in some way, utilise photography as an assisting medium. The camera is made use of in so many practical ways in the ordinary affairs of our daily lives, that it is regarded as a common, serviceable tool.

A camerist of my acquaintance, the victim of a greedy, profiteering landlord, considered it expedient to move from his rent-ridden apartment to other quarters—the half of a two-family house. Having transferred his household goods, pictures and bric-à-brac, he came to the most precious of all his worldly belongings—two cords of hard fire-wood, which he had bought during the late war at top-notch price. He stored his priceless and tempting possession in his new cellar, which is separated from that of his neighbor by a door locked on the other side. He slept poorly that night, being apprehensive for the safety of his precious fire-wood, particularly as his neighbor, the landlord, had no coal and but very little fire-wood. It was towards the end of September, when the warm days of summer had departed. The next day, before breakfast, he slipped down into the cellar, surveyed with satisfaction his valuable hoard, and then took measures of precaution. The early morning sun was streaming through the cellar-windows throwing the carefully arranged woodpile into strong relief. It was a picture to warm the

cockles of his heart. An idea! He acted upon it without delay. He procured his small plate-camera and made a time-exposure of his treasure—to serve as a record. He then carefully sprinkled a thin layer of brown sand, he happened to have, in front of the door leading to the other man's cellar, and also photographed that particular locality. "I'll take no chances," he whispered to himself. Every time, always early in the morning, that he removed an armful of the wood, for use in the living-room, he stopped and made a photographic record of the wood-pile, developed it the same day and affixed to the negative all important data. Every time he examined the wood-pile, he compared its appearance with that recorded by the preceding negative. Moreover, he kept the key to the door leading from his own stairway, so that no one but himself had access to the cellar.

One morning, as he went to procure another armful of wood, he made the usual comparison by the aid of the latest negative. His fears were realised; for what he had dreaded had come to pass. He had been robbed! About ten heavy sticks of costly white birch were gone! He at once made the usual record photograph and also one of the place near the door that led to his neighbor's cellar. He was a fearless man, and decided to "beard the lion in his den." He boldly faced his maleficent neighbor that very evening, and laid before him the record-photographs in regular order, as damning, indubitable evidence. The accused made no admissions, no excuses, but merely asked the amount of the damage—to send a bill and that he would pay it. The photographer-detective assented, took his leave and, before two days had passed, the missing wood had been paid for. There was no more pilfering. Photography had won the day.

Decorative Uses of Small Film-Negatives

WILLIAM S. DAVIS



ANY a time one may wish to send greeting-cards of a more personal interest than it is possible to find in the shops—something showing individual taste in design, or a pictorial bit illustrative to the recipient of past pleasures shared together—and, when this is the case, the question is easily solved if a collection of small film-negatives is at hand from which a selection of suitable subjects can be made.

Sizes from "V. P." to $2\frac{1}{2} \times 4\frac{1}{4}$ are all available, though the $2\frac{1}{4} \times 3\frac{3}{4}$ films seem specially adapted to combining with a decorative border for postcard-printing. However, one is not limited to this size, since designs for various uses can be made larger and printed upon double-weight paper of the proper size instead of using regular sensitised postcards.

Knowing the size of negative, and dimensions of finished work wanted, the next thing is, of course, to prepare a design for the border, including such lettering as may be desired. This should first be drawn on a piece of paper, taking care to get all details in just the position wanted, though, for reasons which will appear, it will not be necessary to draw the lettering backwards. With this for a guide, the actual working-design used in printing can be made upon such material as tracing-paper, tracing-cloth—as used by architects and engineers for plans—or very thin white bond paper free of a watermark. The first, being very translucent, prints quickly and gives strong contrast between the design and background in the print. Tracing-cloth imparts a fine-grain fabric effect to the background if not printed too deeply. Bond-paper, being less translucent than the other materials mentioned, will normally print lighter and show an effect resembling melton-surface mounting-board. For a design of postcard-size, a piece of the material chosen should be cut to 5×7 inches and fastened over the sketch-design with thumb-tacks or push-pins, to prevent slipping. All details are then traced with a pen and waterproof India-ink. An ordinary steel-pen is best for free-hand work, and can be used for straight lines also, though for the latter it is preferable to employ a draughting-pen with the straight edge, owing to the convenience with which light or heavy lines of uniform thickness can be made. To obtain clean-cut results, all lines must be solid, since transparency in any portion would cause such parts to be veiled more or less in the print.

Figure 1 shows a specimen design. The

working-design is on tracing-paper, suitable in size for combination with $2\frac{1}{4} \times 3\frac{1}{4}$ negatives to be printed upon standard-sized postcards, $3\frac{1}{4} \times 5\frac{1}{2}$. The clear space (A) for the picture measures $2\frac{1}{8} \times 3\frac{1}{8}$, and the paper is cut out of this section of the design so as not to interfere with the light-action on the negative. The black border (B) around this opening is made wide enough to cover the outer edges of the film-negative when the latter is in place. Around the entire design is drawn a heavy black line (C) to serve as a guide for placing the cards in the printing-frame when printing.

To use: the design is laid *face down* upon a clean piece of plain glass, 5×7 in size, which is placed in a printing-frame, or machine. Reversing the design in this way brings the lettering right in the print. The film-negative is next adjusted over the opening (A). It is advisable to attach this lightly with a minute touch of glue or paste at each corner to prevent slipping when the sensitised paper is being inserted. Printing is now done just as usual, only a single exposure being required for both picture- and border-design. With negatives of moderate strength, the exposure required for them will cause the border to print with a dark gray background and the design in white. If one wishes to make the border lighter in proportion to the print, this can be done by attaching either fine tissue- or tracing-paper to the face of the glass in the printing-frame and cutting out an opening the size of the picture, thus holding back the light-action locally upon the border-portion. Should the negative employed be unusually thin, or for any reason one wants the border darker proportionately, just reverse the method, attaching a piece of the tissue over the negative alone. This necessitates a longer exposure, thus giving the border more time to print up. A finished print is shown in Figure 2.

Should one prefer to have a design in dark lines upon a lighter ground, the desired result can be readily obtained by making a negative from tracing, using it in place of the latter for border-printing. When making a negative, the clear space reserved for the picture in the tracing-paper design should be blocked out with a piece of black paper so that the same space in the negative will be clear. Also, if made specially for use in obtaining a negative, the black border (B) in the tracing should be left blank to make this portion print dark in the negative; but in case this has not been planned for, this portion can



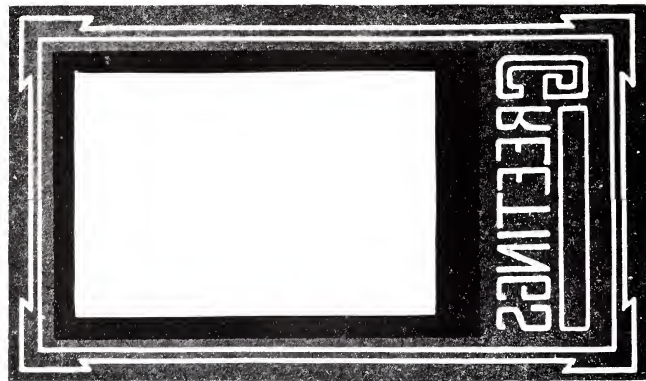
C

PICTURE ONE

WILLIAM S. DAVIS



PICTURE TWO



WILLIAM S. DAVIS

FIGURE THREE



FIGURE FOUR

be painted on the negative afterward with India-ink or regular Opaque.

The negative can be made upon glass-plates or Eastman cut film. For soft results, showing the lines dark on a gray background in the finished print, the negative should be kept rather thin; whereas for a sharp black-and-white effect, it is necessary to give a full exposure and develop up strong in a clean-working developer containing considerable bromide. The regular Velox formula with double or treble the normal amount of bromide added will work satisfactorily, though to obtain an opaque ground in the negative generally requires the use of a slow emulsion, such as a "process" or "commercial" grade of plate.

When making the negative, place the tracing *face up* in the frame, since in this case the lettering should appear reversed in the negative when the emulsion-side is held toward the observer.

Absolute figures for the exposure cannot be given, owing to variation in light, printing-

quality of tracing used, and speed of plate; but from one to five seconds at two feet from a 16 c.p. lamp should be sufficient, the latitude in these figures indicating variation in speed of plate, etc.

Figure 3 illustrates the appearance of a negative made from the tracing of the original design, and Figure 4 a print from same.

In addition to the making of attractive greeting-cards, the method described is also well adapted to other uses, such as the production of menu-designs, place-cards, book-markers, borders for calendars, and inserts for booklet-covers.

If desired, the effectiveness of the result may sometimes be increased by the judicious use of a little color, Velox Water-Color Stamps being just the thing for this purpose. Even though the pictorial insert in the design does not seem to require tinting, an initial-letter might be treated in somewhat the style of an illuminated manuscript or text, specially when a space has been left in the design for the application of color.

The Photography of Watermarks in Paper

DR. O. MENTE



IN the case of documents, the paper of which has a prominent watermark, a reproduction of the latter may often be obtained of sufficient distinctness, even when there is writing on both sides, simply by making a contact print on printing-out or development-paper. Especially, by choosing a development-paper of character suitable to the original which is to be copied, and also by controlling the development, comparatively good copies may be obtained in which the writing on each side of the document is little in evidence.

For example, by giving such a short exposure that the light penetrates only through the thinnest portions, namely, the watermark, of the paper, scarcely any developable effect is produced in the other parts, and a most satisfactory result may be obtained. A further means towards improving the result consists in stopping development at the moment when the watermark has been brought up, while other parts of the image have scarcely begun to develop. Nevertheless, by such methods as these, the result is only a moderately strong image of the watermark, more or less broken up by the writing on the document. Inasmuch as many watermarks do not include minute details, these methods often suffice for recognition and reproduction of their design.

More difficult subjects of this kind are, how-

ever, often encountered, for dealing with which the writer has devised other methods which have proved satisfactory in use. Various forms of procedure may be followed. For example, the original may be mounted between two glass-plates and a negative made by transmitted light, and a weak positive transparency from this latter. This transparency is then brought into register with the negative, and the combination of the two is used for contact printing or enlarging. The final result by this method is, however, but little better than that already mentioned.

Another method is to make the negative, again by transmitted light, on paper of card thickness, or, better, on lantern-emulsion coated on opal. The positive transparency from this negative is bleached with mercury bichloride or solution of iodine in potassium iodide and brought into register with the negative. The result, then, is that the dark lines of the writing are greatly subdued when viewing the combination (through the bleached positive transparency) by reflected light, and the details of the watermark come out fairly well with skilful use of the process.

But the above methods require considerable dexterity and judgment. Moreover, it is almost necessary to employ the wet-collodion process on account of the facility with which negatives and transparencies of the required character are obtained by its means. And when all has been

done the result frequently falls short of expectations. It seemed advisable therefore to seek a process which could be carried out with greater ease and certainty and was applicable to those cases in which the design of the watermark was closely entangled with the writing on one or both sides of the paper.

After many experiments, the writer devised a method dependent upon the lesser thickness of the paper in those parts which represent the watermark. He first experimented with a method of taking an actual cast of the watermark in plaster of Paris. A thin film of plaster of Paris was coated on a flat glass-plate on which the original was laid. More plaster of Paris was applied until a mass of fair thickness was obtained and the whole was then put to dry in a warm place. As soon as dry, preferably by means of a hot plate, the original is readily detached from the plaster of Paris, and often comes away of itself. The relief which is left may be photographed in strong side light, or may be strengthened for photographing by coating it with black lithographic ink and polishing the whole surface with the ball of the hand.

It will be understood that such a process as this does not yield very satisfactory results with watermarks in weak relief, and, moreover, it suffers from the drawback that writing which has been done with a hard pencil on a comparatively soft paper is reproduced by the casting method just as though it formed part of the watermark.

A much more satisfactory method, which works perfectly for the most delicate watermarks, even when accompanied by heavy writing, has been

worked out by the writer in conjunction with Dr. H. Francke, and depends on the diffusion of gas through parts of the paper of different thickness. It is, of course, necessary that the ink which forms the writing should not obstruct the diffusion of the gas, otherwise the process could not be expected to yield better results than those by ordinary printing. In practice, it was found by some preliminary experiments that the ink does not impede the diffusion of the gas (ammonia) in the slightest; and, hence, it was necessary only to devise the most advisable form of the process. After many fruitless experiments the following method of operation was devised and was found to be extremely successful:—A sheet of ordinary development-paper is given a short general exposure (to fog it slightly), developed, fixed, washed, bleached in mercury bichloride, and dried. This "sensitive" paper is used to record the action of the ammonia-gas which passes in different degrees through the document. In order to avoid treating the original with ammonia-solution a piece of flat, unglazed porcelain is soaked in strong ammonia, removed from the solution and allowed to become dry on the surface by short exposure to the air. The original is laid on this plate and the bleached sheet of development-paper laid on it. The ammonia, discharged evenly from the area of the impregnated plate, then passes differentially through the original and darkens the white mercury compound existing over the area of the paper. The clear image of the watermark which is produced in this way may be readily strengthened by use of the lead pencil.

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THE FIRST LESSON

FRANK I. PECKHAM

The Arnold Arboretum

ALLEN H. BENT



MOST institutions of learning are enclosed by four walls and a roof. The Arnold Arboretum consists of a brick-building of moderate size and two hundred and twenty acres, spread out over a mile of length, in a beautiful region of low-rounded hills. Quietly the work has been going on for nearly fifty years, for this is the oldest and most complete arboretum in the country. During its entire existence the director has been Charles Sprague Sargent, and his time, money and energy have made it largely what it is. It is a part of Harvard University, but situated nine or ten miles from it in what was once the town of West Roxbury, which since 1874 has been a part of Boston, though five or six miles from the gilded dome, around which the genial "Autocrat of the Breakfast Table" taught us, "the orbs of the universe are rolled". Motor-cars buzz all around the Arboretum, but they are not allowed within the gates. Although the Arboretum exists primarily for scientific research and experiment and as a living museum of the trees and shrubs that can withstand the climate of Massachusetts, it is much more to those who are reasonably familiar with it.

"Familiarity breeds contempt" is an old maxim; but I suspect that the man who first said it was a dyspeptic. It certainly does not apply to the scenes we love. I have been familiar with the Arboretum for fifteen years—I can look out upon its hills as I write—and I have had a bowing acquaintance with it for many years before; but I have by no means exhausted it, though this is due partly, perhaps, to the resourceful climate of New England. Whether it is regarded as a tree-museum, as a display-ground for some of New England's choicest shrubs, a sanctuary for birds, a monument to our greatest landscape-architect, or a paradise for photographers or other saunterers, matters not.

This land was granted originally to Captain Joseph Weld for services to the Colony—he died in 1646—and it remained in the hands of his descendants until 1806, when it was bought by Benjamin Bussey, a Revolutionary soldier who had acquired a competence as a merchant in Boston. He had lived in Dedham during and

just after the war, and this farm that attracted him was on the old road to Dedham, a road that has been traveled for nearly three hundred years by white men, and the trail that preceded it was used for many centuries by the Indians on their way to Narragansett Bay. The road was used in later years by Hawthorne and the other Brook Farmers when they journeyed to Boston. The house that Bussey built in 1815 is still standing and draped with wistaria. After his death, in 1842, it became the residence of Thomas Motley, Jr., who married Bussey's granddaughter. Motley was a brother of John Lothrop Motley, the historian, who was a frequent visitor. It is still occupied by Thomas Motley's descendants. The hill in the southwestern part of the Arboretum, added in 1894, was named Peters Hill before his Honor, former Mayor Peters, was born. The hill, on the slope of which Bussey built, is naturally called Bussey Hill. Before his day it was called Weld Hill. It was selected by Washington during the early days of the Revolutionary War as a possible place of fortification in case the Continental troops were driven from the heights of Dorchester and Roxbury. On the other side of that hill, at the corner of Center and Alandale Streets—to use modern names—was in those days the Peacock Tavern, to which the commander and his chief of artillery, Knox, occasionally rode. In 1794, the tavern property was bought by Governor Samuel Adams, who made it his summer-home during the nine remaining years of his life. Almost opposite, set into the wall of the Arboretum, is one of the mile-stones placed by Paul Dudley of Roxbury, chief justice of the Colony. It reads, "6 miles [to] Boston 1735 P. D." The next estate beyond was owned by his brother, Colonel William Dudley, at that time. On the side of Peters Hill, at the southwesterly corner of the Arboretum, is a little, old burial ground, adjoining which the church (the second parish in Roxbury) stood from 1712 until 1773. Walter Street, on which it fronts, perpetuates the name of the second minister, Nathaniel Walter, chaplain in the Louisburg expedition in 1745, a son of Rev. Nehemiah Walter of Roxbury, and grandson of Rev. Increase Mather. Thus, it will be seen, the hills of the Arboretum had distinguished visitors even as far back as the eighteenth century.

When Benjamin Bussey died, in 1842, he bequeathed his property to Harvard College for a school for "instruction in practical agriculture,



AFTER THE STORM

ALLEN H. BENT

useful and ornamental gardening, botany, and such other branches of natural science as may tend to promote a knowledge of practical agriculture". Nothing seems to have been done until 1871, when the Bussey Institution was established on the ground. In the meantime, James Arnold, of New Bedford, died, leaving \$100,000 in trust for a similar purpose. Mr. Arnold, Quaker by birth, but Unitarian by adoption, was a son of Thomas Arnold of Providence, married a daughter of William Rotch, Jr., of New Bedford, and there amassed a fortune, dying in December, 1868, aged eighty-seven. In March, 1872, the Arnold trustees, one of whom was George B. Emerson, author of "The Trees and Shrubs of Massachusetts", entered into an agreement with Harvard College for the foundation of an arboretum to bear Mr. Arnold's name, and

it was immediately established by the College authorities on a part of the Bussey estate.

As has already been stated, Professor Charles S. Sargent, by the way, the owner of one of the largest and finest estates in the adjoining town of Brookline, has been Director ever since its inception in 1872, and Jackson T. Dawson, a Yorkshire gardener, was superintendent from that year until his death, in 1916. These two men, of very different type, devoted their lives to the Arboretum. The little green-house, near his home by the Center Street gate, was Mr. Dawson's laboratory. It seems absurdly small; but youthful plants and trees seemed to do his bidding. Professor Sargent has been to Asia twice, searching for new things, and exchanges have been made with various parts of Europe. Only recently his assistant, Professor Wilson,



ARNOLD ARBORETUM- WINTER
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has returned from two years of searching for shrubs in Korea, Formosa and Japan.

In the meantime, the Bussey Institution continues where it was begun on a part of the Bussey estate adjoining the Arboretum. To quote from a recent catalog of Harvard, it "offers opportunities for graduate instruction and research in those principles and problems which underlie the practical applications of zoölogy and botany to human welfare". This is open to students all the year, the Harvard Forest, at Petersham (Massachusetts), supplementing it.

There is still another side to the Arboretum. In 1877 and 1878 Frederiek Law Olmsted, foremost of landscape-architects, a neighbor of Professor Sargent in Brookline, laid out a general plan of planting and of roadways, although his ideas were not carried out for several years afterwards (1883 to 1894). In December, 1882, an agreement was made between the College and the City of Boston by which the Arboretum may be used as a public park. The agreement is an unusual one. To become a part of the park-system, it was necessary for the city to take possession of the land, which it did by right of eminent domain. Then it leased it to Harvard for a term of one thousand years at a rental of one dollar a year, with the privilege of renewal. I wonder how many of the trees now growing will witness the deed of renewal when the year 2882 comes around? The city has built roads and paths, an unobtrusive wall and dignified gates, and does what policing is necessary. Although there were many trees on the ground in 1872, there were hardly any that had attained sufficient age to be called patriarchs.

A writer in the *New England Magazine*, twenty years ago, rhapsodised over the hemlock-wood on the little hill between Bussey Hill and Peters Hill as "reaching back to savage, prehistoric years, before the hardy Northmen or the valiant Latins had solved the mysteries of the unknown western seas." Professor Jack assures us that "the most mature of these native hemlocks may be a little over one hundred years old"; but whatever its age, it is a wonderful bit of wild-hanging wood, with a tiny brook that crosses the Arboretum running at its foot. Along the brook have been planted rhododendrons and beyond are massed the mountain-laurels. Looking down from the slopes of Bussey Hill are the azaleas, and on the other side are the long rows of lilacs that attract so many visitors in May. The Colorado blue spruces and other evergreens—trees with a college-education—receive throughout the year. It is one of the places where horseback riders may be seen; but after all, the Arboretum belongs to the man on foot, and I cannot

help thinking of it as an art-gallery. There are more beautiful pictures here than in any art-museum I have visited. Most of the landscapes are broad canvases; but in the hemlock-wood are smaller pictures that belong with the fairy-tales of our youth, and there is plenty of color—at first, the delicate tints of early spring, followed by the flaming azaleas from the Himalayas, the laurels and rhododendrons and lilacs, all with very beautiful backgrounds of dark green. Then come, in rotation, the subdued colors of summer, the brilliant reds and yellows of a New England October, and the whites of the winter, touched by the pink of early sunset. In addition, there are, at times, wonderful cloud-pictures—Daubigny and the Barbizon masters never surpassed them—and all to be seen without admission fee. Surely, Benjamin Bussey, James Arnold, George B. Emerson, Frederiek Law Olmsted and Charles S. Sargent are among the great benefactors of the human race.

The terms of the lease of the Arboretum recall a song in the opera, "The Barber of Bagdad":

"Hail to your majesty's royal name!

May your race always be free of blame!

May ever Allah procure your aim!

Live till your thousandth year in fame!"

To matter-of-fact people, trees are simply lumber for building houses, or fuel for heating them in winter, or perhaps shade for them in summer; but every landscape-photographer knows the artistic value of trees to his pictures. There are all kinds in the Arboretum—big trees and little trees, evergreen and deciduous; tall, stately trees; graceful, drooping trees; symmetrical trees, and trees picturesque in their irregularity. The photographer has but to choose—not always an easy thing, however. One of my friends will not photograph a leaning tree; but a tree bending low, reaching down for the friendship of a brook, often makes an artistic picture to other eyes, however. Possibly, there are some who think the hemlock-wood dark and gloomy. They will like the more open grove of oaks, where, perhaps, the imagination will see druids at their worship. To some photographers, the delicate filaments of the deciduous trees in winter make the best pictures; others like the strong contrasts of dark evergreens and dazzling snows. The woods on bright days in winter are always beautiful, because of the effect of sunlight and shadow and this, as well as composition, is necessary for a successful landscape. To the beginner, there is no better place to study composition, for all sorts of vistas are possible, trees may be photographed as individuals or in mass, there is a little brook and a tarn for water-effects,



ARNOLD ARBORETUM—SUMMER
ALLEN H. BENT

and these things are within easy reach of a million and a half of people, to say nothing of the numerous visitors that come to Boston. Illustrators, also, will find interesting material here. It ought to be easy to picture Beethoven's Pastoral Symphony, the awakening of serene impressions on arriving in the country, scene by the brookside, the thunderstorm, and glad some and thankful feelings after the storm. I have already spoken of the fairy wood. In the more open spaces part of "L'Allegro" could be illustrated, for there are "Meadows trim, with daisies pied" and "shallow brooks", if not "rivers wide"; but pick out your own subject, and after you have been on one of the hills of the Arboretum, I am sure that you will say with the great poet Milton:

"Straight mine eye hath caught new pleasures,
Whilst the landscape 'round it measures."

So far as I know, no one has reduced photography to the number of pictures that can be made in a given space; but if the brain of any one brought up on a farm works along such lines, I can assure him that the yield per acre here will be a large one. Another thing, the region is quiet, the landscape can be surveyed and the picture selected without hurry. When the Arboretum was established, photographers were not considered; but to-day the picture-maker who cannot take the time to travel far will do well to search for the interesting places near home, and among the attractions in Greater Boston none is worthier of a visit by photographers than the Arnold Arboretum. Would that there were more institutions of learning like it—two hundred acres of tree-filled out-of-doors, open to the public at all times.

It looks as if James Arnold, at least, was destined to live till his thousandth year in fame.

Introducing Clouds in Photographs

E. M. BARKER



ON the October issue of the 1921 PHOTO-ERA is shown an illustration of "Hampton Roads" made from the original negative. Data: July; 6.30 P.M.; made from the pier at Fortress Monroe; camera, Eastman's 4 x 5; lens, 5½-inch Dallmeyer; diaphragm, F/64; exposure, 1/25 second; Stanley plate; pyro-developer, and enlarged to 8 x 10 inches on No. 5 P. M. C. Bromide paper.

Our dear friend, Mr. Wilfred A. French, managing-editor of this periodical, requested the writer some time ago to submit to him an article explaining to the many readers of this magazine how clouds can be introduced in pictures where negatives show plain skies—or, rather, how to transform a daylight picture into an evening-scene.

Some time ago, the writer sent to Mr. French a photograph of the above-named picture, but with a cloud worked in that was photographed many years after the original "Hampton Roads".

You will perceive from the accompanying illustrations that the effect is apparent, one giving an evening and the other a night-effect. The moon, about to emerge from the clouds, casts its rays on the rippling water in the wake of the receding boat, and is placed far enough in the distance to present the boats in silhouette.

The cloud-negative showing the moon was made one evening at Dundalk, Maryland, about

4.30, on a fast Hammer Plate which was backed with a solution made as follows:—

Caramel.....	1 oz.
Gum Arabic.....	1 oz.
Burnt Sienna.....	2 ozs.
Alcohol.....	2 ozs.
Water.....	2 ozs.

which must be kept in a bottle well corked.

I have used many non-halation plates, but do not know of any that will not show halation to some extent. By the use of the above backing, plates may be exposed directly against the sun, as shown in this case, and instead of halation, the periphery of the sun is extremely sharp and appearing on its face is a trace of cloud. If anything, the sharpness of the moon in this instance is too acute.

A stand for diffusing or vignetting should be used. See the accompanying sketch. This stand looks like a reflector such as is used in studios; but it will be noticed that each wing is pivoted near the corners of the ends and not at the center. This is done because it allows for diffusion without exposing the part of the paper while diffusion is taking place. When ready for use, the opening at the center should always be about one-half inch. This stand will be useful for making any size of enlargement.

To begin with, let us suppose that we take the original negative of "Hampton Roads" and enlarge it to an 8 x 10. The plate is placed in the





HAMPTON ROADS—NIGHT

E. M. BARKER

enlarging-camera, film towards the screen, but upside down and, when projected on the screen, it will appear right side up. It's easier to make your composition when seen that way. The next procedure is to focus the negative to the desired size on the screen, after which the light in the enlarging-camera should be adjusted to obtain the proper lighting or fielding on the screen. Replace the frame, containing the negative, in the enlarging-camera, and once more see if it is in true register as when last seen projected on the screen.

The vignetter or dissolving-apparatus should then be placed ten or twelve inches from the lens, but not too near the screen, as this would make the edges of the wings too sharp and the division-lines would be shown altogether too plainly on the finished photograph.

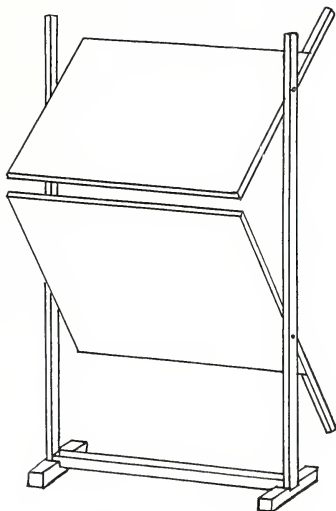
Next, throw the image on the screen and then adjust the vignetter so that the lower edge of the opening will be shown above the smoke-line of "Hampton Roads"; then drop the lower wing as far as it will go, when you will perceive all of "Hampton Roads" and a little of the sky.

Before proceeding, I would suggest the use of a printing-frame in which is placed a white card-mount and placed on the screen for focusing, but in such a manner that it can be replaced in the same position. A portable base as a support for the printing-frame could be attached to the screen and a pin or staple of some kind to prevent the frame being pushed beyond a certain distance. This is an important factor for the reason the frame, after being taken down to have Bromide paper put in, must be replaced in the same identical position. Those who do not use printing-frames for this purpose will find it a difficult matter to locate the same position for the Bromide paper when focusing. The use of the printing-frame is the most safe and sure course.

After lowering the wing, as before mentioned, turn off the light and place the printing-frame with Bromide paper on the screen. Next, place the ruby cap over the lens and turn on the light in the enlarging-machine. You now see under the glare of the red light what you saw with the white light. Grasp the lever of the upper wing of the vignetter and, while moving it up and down enough to show a diffusion of about one inch, the ruby cap is taken off and exposure made.

One-half of "Hampton Roads" has now been utilised. Now for the clouds. Take original negative from the enlarger-frame and in its place put the cloud-negative, but upside down. Place the ruby cap over the lens, turn on the light and adjust the cloud-negative so that the under part of the cloud will not be seen under the lower edge of the upper wing. Now raise the

upper wing and hold it in that position. Raise the lower wing to the desired position and, while taking off the ruby cap, work the lever arm on lower wing to diffuse the division-line while the exposure is being made. The exposed paper is now ready for development. There is no rule for giving the time of exposure in each case. This



SKETCH.

DIFFUSING-STAND

E. M. BARKER

will have to be worked out to obtain the tone in the sky and clouds to harmonise with the tones in the rest of the picture.

When the writer made the 8 x 10 enlargement of "Hampton Roads", the exposure made of the lower part of the picture was one hundred and twenty seconds, and four seconds for the clouds, using a U. S. 64 stop. The difference in exposure between the two negatives was due to the great difference in the density of the negatives.

No doubt, many of our readers have tried double exposures along these lines, but what little has been said in this article may be of interest and instructive.

A Grateful Hobby

E. P. TINKHAM



WITHIN the walls of his little den, an amateur photographer has worked till late afternoon on a sultry summer-day. The heat has been oppressive, the work becomes irksome on such a day, and even the long-continued clicking of a typewriter is monotonous. As he pauses, and looks out at the window, he notes the stillness of the air and the softening of the light as the sun lowers. What a time for camera-work. But a fraction of a mile away lie the beauties of nature, where the voices of stream and wood seem to call in tones to lure the camerist. He is free to go, he lays aside his work, temporarily, and soon with camera and tripod he is engaged in exploring the region of a little stream for the bits of scenery suitable for study on the ground-glass screen.

What a cool, refreshing place on a sun-heated, midsummer day! Just a little stream, but affording to the nature-lover—especially if he be also a maker of pictures—the means of real enjoyment, and to the nerve-weary worker a place to loiter and to rest. The lines of its margins are irregular, but graceful; exquisite forms cluster along its banks, rich in colors with delicate gradations; here its waters darken in the shade, there they sparkle in the sunshine; in the quieter places, its nearly smooth surface holds unsteady reflections, and where the grade descends, it makes continuous, liquid music as it foams or splashes about the stone.

Great, indeed, are the benefits derived from a hobby which leads one to such a place, when time permits, a place where the pursuit of the hobby and the charms of his surroundings cast a spell that banishes from his mind, while so occupied, the fatigue of his work and the annoyances and stress of business, and from which he can return to his work refreshed and with re-

newed interest and vigor. And later, when the negative is made, and also when he views the print, he not only senses the pleasure of that feeling of accomplishment which comes to the artist or the craftsman in the contemplation of a finished piece of work, but again and again the loveliness and freshness of that short outing are pictured in his mind. And at other times, when opportunity offers a few moments' diversion from his regular, daily duties, the scene appears. Again he sees the sparkling stream, here gliding, there eddying; again he hears the music of its splash; again he sees the softening sunlight pouring between the tree-trunks and glinting through the interweaving branches, thus brightening foliage, banks and stream; and again he breathes the atmosphere and lives the recreation of that late afternoon in summer.

'Tis just a little woodland stream.

It sparkles in the sunlight's gleam,

And darkens in the emerald shade;

It foams and splashes 'round the stones,

And sounds old Nature's music-tones,

Then glides along to tangled glade.

Here may the nerve-racked man repair
From mart, from traffic, stress and care;

Here gleeful children wade the brook.

Meanwhile the watchful mother rests;

Friends banquet here as Nature's guests

At sun-warmed bank or shaded nook.

But not alone in summer's green

And autumn's gold and crimson sheen,

The charms of Nature are revealed.

With fancies rapt in fireside-dreams,

We loiter still by woodland streams,

And view the splendors far afield.

In winter's sun or biting storms,

The thoughts exult, the spirit warms,

As Memory tunes the soul anew.

Old Age goes back in very truth

To stroll by woodland-streams of Youth,

And Life's rare summertime review.





A PLACE TO LOITER
E. P. TINKHAM

"I Remember, I Remember"

B. PATANG



REMEMBER, I remember," says the song. "I'll remember, I'll remember," says the camerist, releasing the shutter right and left with never a record of the exposures. "I'll remember. . ." But will he? Just as much as a man remembers to mail letters for his wife. Here is an incident to illustrate it.

A magazine-writer who was motoring through the country, looking for things to write about and getting a vacation at the same time, fell in with a surveying-party that was making the final survey for the construction of an unusually difficult stretch of new railway. Unique engineering-problems were involved and there was much picturesque territory—not to speak of other important facts—that would call for photographic illustration when he came to the writing up his material. He had a camera, but little experience in making pictures. At the end of the first day the engineer remarked: "Don't you make any notes of the exposures? A month or six weeks from now, how are you going to identify all those different views?"

Mr. Writer didn't heed the advice. He was getting a bookful of engineering, construction, trade, resource, and transportation-information from the engineers. He was busy setting it down, classifying it and indexing it, in preparation for the various articles he expected to write; and he thought that by dating his films he would identify them sufficiently. When he wanted to refer to the pictures, his journal and his notes would enable him to recall quickly enough what the pictures represented.

At the end of a fortnight he went back to civilisation, with something over two hundred and fifty pictures, identified only by the date on which each roll of film was exposed. Six weeks later he got out his notes, his journal, and the negatives. The notes and the journal were all right; but when he came to pick out the views that should illustrate his first article, he found himself uncertain about picture after picture. He picked out what he thought were the right ones, wrote about them, and sent off his copy. It was published. A few days later, he received a scorching letter from the editor of the journal that printed it. The engineer declared that the article was all right, but that half the illustrations were rank nonsense when checked up with the facts as stated in the article; they simply didn't illustrate what they were supposed to, and the discrepancies "made a monkey" not

only of the writer, but of the eminent engineers whom he cited as authority.

Mr. Writer recalled the articles he had sent out to other magazines, wrapped his two hundred and fifty films up in a package, marked it "Dead," and went out to borrow money for his rent.

An extreme instance? Of course it is. But did you ever sit by while Papa and Mamma were disputing about how old Frankie was when this picture was made, and whether that was the picture of Mary Brown's or Susie Green's little girl? Enough said.

But, of course, for photographic purposes it isn't enough to keep a record merely of the subject and date of the picture. From the technical viewpoint, these are the least important parts of the data, though of course it is important to know whether the exposures were made in August or in January, in March or in May. The reason for the date is mainly to indicate the season of the year, so that the actinic power of the sun at the time of the exposure will be known. As this needs to be noted anyway, one can just as easily set down the specific day, month, and year; and sometimes this more particular information will turn out to be valuable.

But let the camerist not misinterpret the statement that the indication of the subject is one of the least important parts of the record. It does not mean that a notation of the subject is unnecessary. The negative will show the *character* of the subject; but if one has named the subject and its elements, he has data that will show him how he estimated the exposure that he gave. To illustrate from actual notes:

Clouds light and dark. Yellow house in center, 300 yards; gray stucco at left. Light green foliage.

White birch-clump with pines and hemlocks as background; 50 feet.

Pond and water-jet, Forest Park, with waders (light and dark clothing).

Flower-banks at Rose Gardens. Yellow, red, white, green; 20 feet.

When one goes back to explicit data of this kind in studying the negative, he sees or can quickly determine what classification he used on the exposure-meter to decide the length of exposure. Let the expert smile at the idea. He knows all this by heart, but the average camerist does not find it a smiling matter to decide offhand what classification his subject falls under; and when, having used one classification, he gets an under- or an over-exposure, he will know better



THE SPIRIT OF CHRISTMAS
FANNIE T. CASSIDY

than to use that classification the next time he is making a similar subject. His explicit data explains to him what was his error in judgment. Further, it gives him a clue to any exceptional elements in the subject that called for a variation of the standard time for such a subject.

The camerist who conscientiously keeps a detailed record of his subjects and their elements, and studies his negatives in the light of this data, will make much surer, if not more rapid, progress in developing his judgment of proper exposure according to the requirements of the subject he is photographing.

"Gee, that's a lot of work," exclaims the camerist. Of course, it is. Learning anything is a lot of work. Good golf is the result of a lot of work; good tennis is the result of a lot of work; good solitaire is; good fishing is; good baseball is; good whist is. And without a lot of work, there will be no good photography. What of it? The work is part of the fun, and the results are part of the benefit. A lot of work! As far as that goes, eating is work—but please pass the pie.

But an itemised record of each subject is only one of several entries that ought to be made concerning each exposure. The time of the day will—to pun—give one much light on his pictures. If you don't believe it, experiment. Try photographing the old roan mare with the same stop and time at eight, ten, and twelve o'clock forenoon, and one, three, and five afternoon.

The intensity of the light needs to be recorded, too—because one will not remember it. Moreover, it may vary noticeably within a short space of time. The beginner doesn't realize how closely such variations need to be watched. Clouds, moisture gathering in the upper air, dust brought in before some current of wind, may change an intense to a merely bright or a faint sun very quickly—and the difference between intense and merely bright sun is easy to overlook. The most deceiving fluctuations are those of a clear day; one may not notice them at all unless he stops to think. Setting down the memorandum trains him to judge the quality of the light.

The position of the sun with reference to the subject and lens is another item of significance. As I write, I have before me two negatives made from the same viewpoint, within two minutes of each other, with the same stop and speed, under an unchanged light. One of them shows one part of a crescent hillside; the other shows the remaining part of the same hillside. For the first, the camera had the sun directly behind it; for the other, it had the sun at right-angles. The second negative is under-exposed in comparison with the first. Only by noting facts of this kind will the beginner learn to judge those little differ-

ences in conditions that make almost every exposure, to some extent, a separate and distinct problem. Those differences that try the tyro in patience and judgment prove the adept's skill.

For data concerning light and sun, a system of abbreviations and symbols will be convenient. To indicate intensity, the Harvey classifications are very satisfactory: Intense, Bright, Faint Sun, Bright Cloudy, Dull Cloudy, Very Dull. These can be abbreviated to Int., B, F, BC, DC, VD. Personally, I like the light-tables of the Burroughs Wellcome & Company's Exposure-Calculator because they give separate values for the early and late lights of the day. They do not include a column for "Intense"; but even in summer, one works a great deal more under "Bright" than under "Intense."

To indicate what seem to be variations of these degrees of intensity, the *plus* and *minus* signs can be employed. At times, I am doubtful whether my sun is intense or merely very bright; or, perhaps, whether it is quite as strong as bright. I then note it as $-Int.$ or $+B.$ or as $-B.$ as the case may seem to be. These *plus* and *minus* notes are more useful, however, in studying the correctness of the timing from the negative than they are in determining the time to be given the exposure—at least, for the beginner.

If the film be exposed according to the normal time indicated by the meter for the nearest degree of light, without reference to the *plus* or *minus* gradations, then developed promptly and examined for under- or over-exposure while one can still recall readily the quality of the light, these extra notations will tell him whether he was or was not accurate in judging the variation. In other words, he sticks to the normal values in the exposure; but by comparing the results with his notation of estimated differences he gradually trains himself to sense finer gradations in light. As he grows surer in sensing such gradations, he naturally begins to use a finer time-adjustment for his exposures.

As a symbol to indicate the position from which the light falls, the arrow is excellent, supplemented if desired with the right-angle sign for light falling across the lens at right-angles. The table shows the employment of these symbols:

- ↓ light coming from straight ahead.
- ↘ light coming diagonally from ahead on right.
- ↗ light coming diagonally from ahead on left.
- ↖ light coming from over right shoulder.
- ↗ light coming from over left shoulder.
- ↑ light coming from behind.

← or [R] light coming at right-angle from right.
→ or [L] light coming at right-angle from left.

(The letters can be omitted in using the right-angle symbols.)

The remaining data that one will enter invariably are the stop used and the length of the exposure. Not infrequently, however, additional facts may be significant. Such would be the stirring of a brisk breeze or a wind, since this and not incorrect focusing might be responsible for a blurred image—either through shaking the camera on the tripod or through moving foliage and the like. As intimated already, it is well always to note the distance of the object. This I think desirable even when one uses the groundglass or the reflecting-mirror for focusing, since it helps to account for poor perspective and for indistinctness in near or distant parts of the subject. It is especially advisable for beginners with the short-focus lens; for it will get them into the habit of considering perspective before making the exposure. One who is unaccustomed to its exaggerated perspective within a fairly deep zone of definition in foreground pictures, will commit ridiculous atrocities with the short-focus lens. A friend showed me, the other day, a picture that puzzled him greatly. It was a group of children, one of whom was absurdly like a dwarf. The definition was clear, and he could not account for the incongruously diminutive figure. The reason was, that this child was standing some feet farther from the camera than the others. Had he recorded the near and far distances of his group—probably 8 ft. to 15 ft.—his memorandum together with the laughable group that he produced would have revealed the reason for the disproportion and fixed in his mind the fact that with a $3\frac{1}{2}$ -inch lens one cannot get a satisfactory perspective between objects some of which are only eight or nine and some as much as fourteen or fifteen feet from the camera—although one can get a fairly clean-cut image. Still speaking for the benefit of beginners, I would advise that the distance of landscapes be noted down. Theoretically, a landscape at 200 feet is a distant landscape; but sooner or later one is going to discover that there is a desirable gradation of exposures for landscapes—and other distance pictures—at 200 or 300 feet; and those at 1000 or 2000 or 5000 feet. Here, again, study of the negatives in the light of full exposure-data will be instructive. The point is, that such data establish standards of measurement in one's mind, which he will use, perhaps unwisely, as guides in his later work.

The form in which the memorandum is made should be standardised. My own records are

made on one side only of the pages of a perforated pocket-reminder, one exposure to each division of the page. Assuming that one files his films (or plates) in envelopes, the complete record of every exposure, having been torn from the page along the perforations, can be pasted on the envelope, thus providing a full account of the negative at the least outlay of time and trouble. Here is the way the record looks before detaching. The Arabic number is that of the roll of film—one can run the series on indefinitely—the letter indicates the particular film in the roll. To make certain that the films shall not get mixed up, the roll-number and the film-letter can be inked on the edge of the film. (The Auto-graphic film is convenient for numbering.)

108—A	4:45 p	5/27/22
Glen & Porter Lake, Forest Pk. B.← F 18 1/25. $\frac{1}{4}$ mile— $\frac{1}{2}$ m. Ansco No. 3 Spdx., Ans. anast. F 4.5 Spdx. film.		
108—B	5 p	5/27/22
Rose Gardens, Forest Pk. B. ↖ F/8 1/25. Vista 40 ft.—200 yds. (colonnade gray-white, much green foliage, with flowers white, red, yel.) Ans. Spdx. 3, Ans. anast. F 4.5, Spdx. film.		
108—C	5:15 p	2/27/22
Flower-banks at Rose Gardens, Forest Pk. Yel. red, white, much green fol. B. ↖ F/16 1 sec. 16 ft. (10–20 ft.) Ans. Spdx. 3, Ans. anast. F 4.5, Ans. Spdx. film.		
113—D	3 p	6/9/22
R. & mother, Pienie (R.'s birthday), Near Notch (Granby). Under trees, moderate foliage. ↑ B. — F 6 1/25. 8 ft. Ans. Spdx. No. 3, Ans. anast. F 4.5, Spdx. film.		
Pl 227*	9:15 a	4/21/22
Mill and trees, Chicopee River, Lud- low. Reflections. Red brick, light stone, heavy green opposite bank. 200– 500 ft. B. ↑ F 16 1 sec. Ray bellows, RR lens, Standard plate, 4 x 5.		

*Plate No. 227. In the pocket-reminder blank is an unused line extending from film to plate in the record. A strip cut out and pasted on the envelope, and every trace in each roll of film will have a continuous record, even if the film is cut into separate pieces. There will be memorandum trace with this to roll 113 and roll 108 will have detached some time after roll 108.

A, B, C, D, E, F.



OLD ROTHENBURG



EDITORIAL



The Ideal December Activity

A WEEKLY publication devoted to professional photography is doing admirable work helping the studio-proprietor to prepare effective advertisements. Among the slogans suggested, in this connection, is one called, "Say 'Merry Christmas' with a Photograph."

Now, although this means that the reader of this alluring suggestion should sit for his picture and then send a copy to each of his friends, it can be interpreted to apply also to the worker in pictorial photography. Indeed—and with no intention to disparage the admirable practice of utilising one's portrait-photograph as a Christmas-gift—it is quite probable that an enlarged print of an attractive and personally photographed subject would be equally acceptable. Unless the author of artistic negatives has already done so, he should prepare at once his photographic Christmas-gifts and not leave this delightful work to the last moment. First of all, however, he should try to ascertain by diplomatic means the taste or preference of the person or persons to be favored, and then act accordingly. In distributing Christmas-gifts of this character, the wise photo-pictorialist will not commit the indiscretion of giving a marine-subject to a person whose preference would be for a landscape; or *vice versa*. The giver would be disappointed to learn, in some way, that his picture of a thrilling horse-race was not framed and hung on the wall, because the recipient preferred a picture of almost any other subject. Mistakes of this kind have been made in the past, and it may be well to caution the well-meaning but not discriminating givers of pictures which they sincerely hope will embellish the homes of the recipients. Of course, a subject of general interest, such as a view in one of our national parks, an artistic interpretation of a magnificent public building, or of some celebrated monument in the old world, is a wise selection and can not but delight the art-loving recipient.

The advantage of beginning early with the preparation of enlarged prints intended as Christmas-presents is that it affords the worker ample time in which to procure the necessary materials—printing-mediums, chemicals and mounts. If the pictures are to be framed—happy the worker who is able to give a completed work of art!—then the need of still greater haste; for

during the weeks preceding Christmas, dealers and frame-makers are generally rushed with orders.

If, however, the maker of an unusually attractive pictorial photograph should not be skilled in some of the manipulative printing-processes and desires to provide something distinctly different from a straight bromide print—a multiple gum or bromoil, for instance—he can engage the services of a professional photo-finisher or specialist; or, if need be, he may induce an expert fellow-worker of his camera club to prepare a rare print for him. All the same, a properly made bromide enlargement of an artistic subject will always give pleasure.

Finally—and to the credit and honor of photography as an expressive medium—it is not too much to say that the amateur pictorialist, who is in a position to select as a present for any important occasion a print of virtually his own creation, is to be envied. His gift is unique, in that it combines the elements of individuality and exclusiveness. It is a picture that cannot be bought in the art-stores. It can be duplicated only by the maker or owner of the negative and, although it is not his own portrait made by a professional photographer, the picture, as it adorns and beautifies the home of his friend, reflects the giver's taste, skill and personality. Perhaps, too, it may serve to suggest the image of the giver—not so vividly, maybe, as a portrait, but surely as pleasantly and as permanently.

RECOGNISING the importance of the latest popular pastime, radio, which enables the owner of a small receiving-set to enjoy vocal and instrumental music, news-events, lectures and recitations broadcasted at a distance of hundreds of miles, the Union Camera Club of Boston has adopted radio as a direct means to spread photographic information. The club has arranged with the Shepard Stores, Station WNAC, Boston, Mass., to radiophone a series of ten-minute talks on timely photographic topics. The first three of these talks, "Lenses", "Exposure and Development" and "Don'ts in Photography", were delivered on Thursday evenings, at 7.30 o'clock, beginning October 26, by Mr. Ralph Osborne, an eminently accomplished member of the camera club. This is a distinct innovation in photographic instruction and worthy of adoption by other camera clubs.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition
Wolfeboro, New Hampshire, U.S.A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$3.00.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface and sepias are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins; but in every case, prints should be protected by strong, stiff boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Parks

Closed September 30, 1922

First Prize: None awarded.

Second Prize: Alexander Murray.

Third Prize: Beatrice B. Bell.

Honorable Mention: Alec Blackie; F. E. Bronson; Linda E. Cattell; Martha Curry; Chas. J. Dewey; R. L. Edmonson; Louis J. Garday; Harold Gray; Helen E. Greenwood; Henry W. Heitman; A. R. Hut-ton; John Irwin; Helmut Kroening; Dr. K. Koike; F. W. G. Moebius; Herbert Rodeck; H. B. Rudolph; J. Herbert Saunders; U. Shindo; John Spies; Mrs. E. L. Smith; Mrs. R. M. Weller; Cornelius Westervelt; Wm. C. Whinecup.

Subjects for Competition—1922

"Parks." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.

Subjects for Competition—1923

"Home-Portraits." Closes January 31.

"Miscellaneous." Closes February 28.

"Child-Studies." Closes March 31.

"Artistic Interiors." Closes April 30.

"Bridges." Closes May 31.

"Marines." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Summer-Sports." Closes August 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Should Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, are inclined to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know?



BRIDLE PATH—BOSTON PARK SYSTEM ALEXANDER MURRAY
SECOND PRIZE—PARKS

Inventing an Exposure-Meter is No Easy Task

IN the August, 1922, issue, *Beginners' Department*, appeared an editorial, "Get Down to Photographic Facts". Apparently it interested Mr. G. L. Harvey, maker of the Harvey Exposure-Meter, for he wrote, "It is certainly to the point. I, of course, was especially interested in the paragraph on exposures". Then he went on to tell of some of his experiences in improving his meter to its present standard of efficiency. We are sure that what he says will be of general interest as showing that the inventor of an exposure-meter has many problems to face in order to make a device that will meet the approval of the average practical amateur or professional photographer.

We quote from Mr. Harvey's letter: "Whenever the average American citizen purchases an article, he invariably tries first to make it work. Some day—but not as a rule—he may read the instruction-book sent with the goods. With this fact in mind, I started out with the answer on the first page of my instruction-

book. Later on, the book explains the use of the device. A writer of considerable note read over the proof of my instruction-book and he told me that I had placed the card before the horse; but it was so left.

"Before I worked out my meter, I used all exposure-meters with the greatest possible care. It was necessary to know how much to increase or decrease the time given by most meters in order to determine the correct exposure. The various meters gave a great variety of factors to be used for the various classes of outdoor-subjects. It is difficult to realize that it requires about 200 times different exposure to make photographs of various outdoor-subjects even under the same conditions of light, plate or film and stop. This seems like a misstatement; but if you set my meter at any position you will see, for instance, under stop 32 that about 180 to 200 times more time is required to make a picture of a subject in the lowest paragraph of subjects than in the top class. This gradation of exposures of the various classes of subjects was most difficult for me to comprehend. But



NORWAY PINES—BEMIDJI PARK

THIRD PRIZE—PARKS

BEATRICE B. BELL

what makes the picture after all? It is the light reflected back to the camera from the subject, and not the general light around you. Some objects reflect back more light than others. A perfect knowledge of this fact is absolutely essential to proper exposure. I doubt if an oldtime user of my meter realises that there is such a vast difference in exposure required. He has no reason to know it. He simply reads the exposure given on the meter and makes the picture. If the light-conditions change, the time of year, the location north or south, the kind of plate or film—then there are great changes in the proper exposure. The exposures given are simply those that I found best from thousands of tests; and there is no reason why any one should not make as successful pictures as I did.

"It has been my endeavor to make my meter as fool-proof as possible. No meter will be absolutely perfect, I suppose; but to show the ease that was taken, see what my meter says for the correct exposure of a 'building'. It gives five different exposures, as follows:

1. White building, no heavy shadows.
2. Dark building, no heavy shadows.
3. Any building all or part in shade.
4. The north wall of a building when among scattering trees.
5. Skyscraper-streets, in the woods, camp-scenes.

It takes some judgment to select the proper paragraph; yet, after all, very little, as the classes given

cover nearly every subject. The instruction-book goes further with simple rules and additional explanation of classes of subjects. Many meters require the users to figure out the exposure for other stops. This is not so easily done as one might think, except with the U.S. stop-numbers. Errors are apt to occur. For instance, I heard a party say $3 \times 1/25 = 1/75$!"

No doubt other inventors and makers of standard exposure-devices have found it difficult to meet the demand for an effective, yet simple, device. We believe that often camerists do not appreciate the time, study and labor that is required to produce the various exposure-devices now on the market which some of us are inclined, all too hastily, to condemn rather than try to understand.

Early Daguerreotypy in Boston

TO THE EDITOR OF PHOTO-ERA:—IN regard to the earliest photographs made in Boston the following notice, which appeared in the *Daily Advertiser*, March 28, 1840, may be of interest:

THE DAGUERRETYPE.—M. Gouraud gave his first lecture at the Temple yesterday. He made a beautiful view of Park street, with the intervening trees, and part of the Common, covered with snow. The view was made, after placing the plate, in precisely ten minutes. His second lecture will be given on Tuesday. The third will be on Friday instead of Thursday, on account of the public Fast.

Two days earlier the same paper printed nearly a column on the "Manner of Making Portraits by the Daguerreotype." "We are indebted to M. Gouraud," the editor wrote, "for the following communication, which has been in our hands from the 16th inst., the publication having been deferred for lack of room." Here are some of the interesting things M. Gouraud wrote:

Within fifteen days after the publication of the process of M. Daguerre, in Paris, people in every quarter were making portraits. At first, they were all made with the eyes (of the sitter) shut. M. Susse was one of the first amateurs who succeeded in most satisfactory manner. . . . Everyone began to look about for some means to shorten the period of from fifteen to twenty-five minutes which M. Susse . . . had employed in making his pretty portraits—with the eyes shut. . . . M. Abel Rendu adopted an idea which seemed new and produced portraits with eyes open. . . . I immediately made a trial of this method. . . . The portraits I obtained were formed in from one minute to two minutes twenty-seven seconds. . . . I render it thus public . . . in order that they may know I am able to make the portrait of any person who wishes it. . . . A man should be dressed in clear gray coat, pantaloons of a little deeper hue, vest of fane ground, yellow, orange if possible. . . .

By way of postscript M. Gouraud adds:

By adopting a confidential communication from M. D. G., the French Professor at Cambridge . . . I think it is very probable that we shall succeed in obtaining a Daguerreotype portrait in much less time than by the process above described.

F. Gouraud appeared in the 1840 directory of Boston only. He boarded at 137 Tremont Street. His occupation was not given.

Feb. 3, 1841, the following advertisement appeared in the *Advertiser*:

DAGUERRETYPE.

Mr. Plumbe, Prof. Photography, having at length succeeded in so far improving his apparatus, as to be enabled to produce a perfect Photographic Miniature, in any weather, and consequently, without using the direct rays of the sun, proposes to instruct a limited number of gentlemen in this beautiful and valuable art, who will be furnished with complete sets of the Improved Patent Apparatus, by means of which any one may be enabled to produce a likeness in any ordinary room, without opening a window, or requiring any peculiar adjustment of the light. Hitherto, it has been generally supposed that sunshine and an open window were indispensable to the production of Daguerreotype miniatures; but the important improvement just perfected proves that this is a mis-take. The new apparatus costs only about one half the price of the other, and furnishes the ability to its possessor of securing an independence in a profession as honorable, interesting and agreeable as any other, by the expenditure of a mere trifle, and a few weeks of application. Can any other pursuit in life present the same advantages in furnishing the means of gentlemanly support, not to say fortune?

Miniatures made in beautiful style: terms 83.

Daguerreotype Rooms, Harrington's Museum, 76 Court Street.

This advertisement, with some changes, appeared from time to time throughout the year. In May, he moved to the spacious hall over the Whig Reading Room, Pemberton Square, and called his place the Photographic Institute. At the same time he changed his appeal so that ladies also might share in the chance

to make a fortune. In February, 1843, his advertisement read, Plumbe Daguerrian Gallery of Patent Colored Photographs, 75 Court and 123 Washington Streets, Boston, Chestnut Street, Philadelphia, and Broadway, Saratoga Springs, constituting the oldest and most extensive establishment of the kind in the world and containing nearly a thousand pictures. Likenesses made every day at three dollars each.

May 15, 1843, Albert S. Southworth & Co. advertised Premium Daguerreotype taking at 51½ Tremont Row. Mr. Southworth says that he was the first to color daguerreotypes and that he received a premium last October at the Fair of the American Institute in New York for the best Daguerreotype and also at the Mechanics Fair in Boston in 1841. The advertisement has a strange wood-cut representing the sun, the sitter, and the portrait on an easel.

ALLEN H. BENT.

AUGUST 13, 1922.

[Having access to the Boston City Directories issued since their beginning, about one hundred years ago, and being greatly interested in the practice of photography in Boston during the early daguerreotype days, the Editor, personally, investigated the somewhat brief activities, in Boston, of M. Gouraud and finds that Mr. Bent is correct. It is not clear, however, whether M. Gouraud came to America from France for the purpose of teaching people how to make daguerreotypes, or whether he sought to make a living as a daguerreotypist. In any event, Albert Southworth is listed in the Boston City Directory of 1841, and of succeeding years, as a maker of Daguerreotype Miniatures. It is barely possible that he learned the art from M. Gouraud in 1840, although as early as 1839 Professor Draper made his famous daguerreotype-portrait of Dorothy Catherine Draper, on the roof of the New York University building. It would be interesting to know what degree of success attended the efforts of M. Gouraud as an instructor in Daguerreotype.—EDITOR.]

Desensitising

THE way in which the process of desensitising with phenosafranine has come to the front, as a new and useful practice in negative-making, provides an interesting object lesson in the evolution of photographic methods, says *The British Journal* editorially. For desensitising, as a process, is by no means new. The literature of the past twenty or thirty years contains many papers on it; and in that rich, yet arid, work, "Investigations on the Theory of Photographic Processes," by Sheppard & Mees, the properties of mineral oxidising substances as desensitising-agents are the subject of detailed notice. Had these properties been regarded from a different angle, desensitising as a practical process would, no doubt, have come years ago. But by the above investigators, as well as by Vidal, Sterry and others, the desensitising of an exposed plate was considered solely in relation to the still elusive problem of the nature of the latent image. The convenience in practical work of a solution which partially destroyed the sensitiveness of an emulsion and left the latent image intact, evidently did not occur to these experimenters, intent on the infinitely more fundamental object. The twofold moral of the incident is that the practically minded must study the work of the scientific people for possible applications of it not contemplated by the latter, who also, as far as possible, should describe their experimental results in plain language whatever technicalities they may admit into their discussion of them.



SUBJECT FOR NEXT COMPETITION
ADVANCED WORKERS



ON THE PORCH

ALICE G. BAUMANN

EXAMPLE OF INTERPRETATION

**Advanced Competition—At-Home Portraits
Closes January 31, 1923**

ALTHOUGH we may enjoy beautiful landscapes, stirring speed-pictures or charming nature-studies, the photograph of a man, a woman or a child we know, usually arouses our deepest interest. In its strict sense, an at-home portrait is a formal photographic study and it requires much artistic and technical skill to make a good one. Furthermore, an at-home portrait should not be confused with an indoor-genre. To be sure, the dividing line is often a difficult one to determine. However, if the worker will bear in mind that one is rather formal and the other informal, he

will have a reasonably safe guide. In a sense they are alike in that they are made indoors and, in most cases, at home. Another point of similarity may be noted with regard to the posing of the subject and the composition. I refer to naturalness, simplicity and—most important of all—truthfulness. There are other less apparent points of similarity; but these need not be described. Excepting the similarities mentioned, the difference grows greater, the more thought the camerist gives the matter. At first glance, he might assume that it were straining a point to find and to express so fine a distinction. It is to convince and to help our readers that we are conducting this competition to bring out clearly the difference between an

at-home portrait and an indoor-genre. It matters little whether the worker is an amateur or a professional; the important object is to produce an at-home portrait with all the earmarks of professional training. I know of several cases where an at-home portrait proved to be all that a family possessed to remind them of a loved one. For some reason, there are certain members of every family who simply will not go to a professional studio to be photographed. However, in most cases, after much persuasion, such persons will let a member of the family or, perhaps, a professional, make a picture of them in the home. Moreover, it might be pointed out that there is some weight to the argument that it is less bother to have the photographer come to you than for you to go to him.

Now, in this competition, it should be taken for granted that every at-home portrait should represent the best possible photograph of the subject. First, because of its value in the years to come; second, because it will prove convincingly whether or not the worker has the taste and artistic skill he should have; and, third, because in at-home portraiture comes the test of one's knowledge of illumination, exposure, developing and printing to a greater degree than in most other branches of photography.

Whenever possible, the illumination should be daylight. A large window or door is excellent. In certain cases, artificial light may be used to remove or to soften heavy shadows. Inasmuch as the average amateur worker does not possess an artificial-light equipment, other than the usual electrical or gas house-illumination, he will find that the intelligent use of flashpowder, or flash-sheets, is of great assistance. In certain circumstances, he may be able to obtain the loan of a standard flashlamp or arc-lamp from his dealer. Although artificial illumination may be of value as an accessory, it should not be given preference.

The use of screens and reflectors is of great importance. A sheet on the floor in front of the subject—but not included in the picture—will reflect light upward into the face of the sitter. Also, a sheet placed at an angle to one side of the subject will do much to lighten the face and to reduce the intensity of the shadows. A large white cardboard is very useful to reflect light wherever it may be needed in the picture. Photographers may learn much from the motion-picture director and cameraman with regard to methods of lighting the face in all manner of circumstances—indoors and outdoors.

Every effort should be made to use daylight whenever it is possible to do so. However, there are often conditions that preclude the use of daylight and make it necessary to utilise artificial illumination. At present, there are several standard portable portrait-flashlamps and arc-light-equipments to be procured, and very admirable results may be obtained without the use of daylight. However, artificial illumination is apt to be harsh unless the photographer knows how to soften the power of the light by means of screens, reflectors and the position of the subject. Usually, screens are part of the original flashlamp-equipment, and these are held in position by metal holders which are collapsible and are extended much like a tripod.

Some of our readers, especially amateurs, may doubt their ability to attempt an at-home portrait. Let me assure them that it is not beyond their photographic skill. The pages of PHOTO-ERA MAGAZINE have been filled with delightful at-home portraits made by amateurs equipped with moderate-priced hand-cameras. In some cases, these amateurs have obtained the temporary use of professional apparatus; but this has been

the exception rather than the rule. In the present competition, it would be of distinct advantage for the amateur worker to provide himself with an outfit that would enable him to express his artistic skill to advantage. It should not be a difficult matter for him to obtain a studio-stand for a few days from his dealer at a low rental. If, in addition, he can obtain a view or studio-camera, so much the better. However, his own hand-camera fitted with a portrait-attachment will enable him to do excellent work.

We are especially interested to have professional and semi-professional photographers enter this competition. In a sense, they have an advantage over the average amateur in that they already possess the necessary equipment and experience. Nevertheless, such an amateur as Dr. T. W. Kilmer is an at-home portraitist of uncommon skill, and to surpass or even to equal him, even a leading professional photographer will be compelled to exert himself. The professional at-home portraitist has learned much about human nature. He has learned how to manage men, women and children in *their homes*. In the studio, it is comparatively easy to pose and light the sitter; for he comes to be photographed and expects to be told what to do. In the home, it is often very different. The photographer is invited to make pictures in the environment and position that the *subject himself* considers satisfactory. Very often, the at-home portraitist is hard put to convince the subject—diplomatically, of course—that a certain position or background is impossible, artistically.

In connection with this competition, it is advisable for the contributor to obtain and read carefully at least one elementary book or booklet on at-home portraiture. It is not necessary to purchase such a book, as there are some very helpful brochures that are distributed free of charge by the manufacturers of flashlamps. Several standard works on photography contain chapters that will be very helpful. These books may be found in most libraries. The files of PHOTO-ERA MAGAZINE contain many practical and helpful articles on at-home portraiture. Among these may be mentioned "Home Portraiture Using an Ordinary Window", by Felix Raymer, May, 1908; "Home-Portraiture", by Fedora E. D. Brown, December, 1908; "Indoor Portraiture in Dull Weather", by J. Peat Miller, April, 1910; "Some Notes on Home-Portraiture", by Katherine B. Stanley, April, 1911; "Home-Portraiture That Is Different", by Felix Raymer, September, 1911; "Home-Portraiture", by David J. Cook, October, 1912; "At-Home Portraiture", by Katherine Bingham, January, 1913; "Portrait-Photography for Amateurs", by J. G. Allshouse, February, 1913; "Indoor-Portraiture", by Katherine Bingham, September, 1914; and "Home-Portraits of Little Children", by Katherine Bingham, December, 1914; "Photographing Children", October, 1919.

Those amateur workers who have a desire to enter the professional ranks, will find this competition very valuable as an aid to determine their fitness to do serious portrait-photography. The winner of the first prize may feel reasonably sure that he has the qualifications necessary to make professional photography a successful vocation. Obviously, it is merely a beginning; but, to say the least, it should serve as an encouragement to greater effort and to adhere strictly to high technical and artistic standards. None of us knows what he can do until a thorough test is made of his skill, taste and initiative. How sincere is the desire to become a portrait-photographer? The present competition will help to answer that question.

A. H. B.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition
Wolfeboro, New Hampshire, U.S.A.



Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here is **without any practical help from friend or professional expert**. Or, in case of dual authorship, names of both should be given. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era Magazine awards are announced.** Prints on rough or linen-finish surface paper and sepias are not suitable for reproduction, and should be accompanied by smooth prints that have the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins, but in every case, prints should be protected by strong, stiff boards, or of a kind that breaks slightly without breaking. Large packages may be sent by express (prepaid).

Awards—Beginners' Competition

Closed September 30, 1922

First Prize: Caleb J. Milne, 3d.

Second Prize: Melvin C. Parrish.

Honorable Mention: R. A. Cecchini; Charles Ditchfield; Philip Mehler; Masakichi Nakamura; Miss Lilian F. Newton; James G. Tannahill.



Winter Photographic Opportunities

It is encouraging to note that amateur photographers are gradually realizing that camera-work may be done at any time of the year. There is no reason, whatever, that photographic activity should cease the moment snow flies or the weather becomes cold and blustery. To be sure, if one is to consider creature-comfort exclusively, then the winter with its cold, ice and snow has very little attraction. However, I am optimistic enough to believe that most beginners and amateur photographers are interested sufficiently in photography to brave the winter-weather and to continue, without interruption, the making of pictures out-of-doors and indoors. If for no other reason, it should be remembered that snow-photography is one of the most beautiful and most fascinating branches of the art. Then, add to this the stirring appeal of winter-sports and there is no lack of urge to the red-blooded man or woman who really loves photography. For that matter, we might say that the summer-months are too hot, too rainy or too "something" to make pictures. The fact remains that the true lover of photography is up and about at every opportunity throughout the year.

We should not have very great confidence in the captain of a ship who never sailed the sea in a storm. Neither would we hold a very high opinion of the camerist who never ventured out unless the atmosphere was clear and the weather was warm. The photographer whom we admire is the one who can make good pictures summer and winter, in fair weather and foul. To do this, we know that he has worked hard, studied and mastered his equipment. We like the man or woman who can "put over" a good thing, no matter what the circumstances may be at the time. Those of my readers who have neglected to look the situation squarely in the face, will do well to take stock of their own photographic attainments and see if it is not possible to put more into photography and thus get more pleasure and profit out of it.

For example, consider the number of new and excellent photographic textbooks, the magazines, the annuals, the camera-club reports, the catalogs, and the other information that is to be had from many sources. There are days when the most enthusiastic worker will find it impossible to venture out-of-doors. Then is the time to read and study the theoretical side of photography. When the next fair day arrives, let the camerist go out and put into practice what he has read; let him prove the truth of the principles and



AUGUST SHADOWS

CALEB J. MILNE, 3D

FIRST PRIZE—BEGINNERS' COMPETITION

methods set down in books and catalogs. By so doing, the beginner or amateur photographer will enrich his knowledge, stimulate his interest and find greater photographic heights to scale. There are those who contend that reading profits little; that it is practical experience, not theory, upon which the camerist should depend for success. However, there is no question that most intelligent workers believe that thorough reading *combined* with experience yields better and quicker returns. Hence, let the reader grasp every opportunity to read and to broaden his knowledge of technique, art and pictorial composition.

In this department, of the October, 1922, issue, I suggested setting aside a photographic evening each week. The idea appears to have met with favor, and I am referring to it again because it seems to be one way to ensure continued interest during the months of the year when enlarging, water-coloring, lantern-slide making and other branches of photographic work may be done to advantage. Then, too, this is an excellent time to experiment with different developers, plates, films and apparatus. One evening of careful work may contribute materially to success later on at an exhibition or in a contest. A photographic evening at home is an opportunity that may be made very enjoyable and profitable. Let every ambitious camerist see to it that he arranges a photographic at-home, at least, one a week. It will be worth while.

Those of my readers who are so situated that they can visit an art-museum, such as the Metropolitan Museum of Art, New York City, the Boston Museum of Fine Arts or any one of a number in our large cities or towns, should make an effort to do so. Whatever our opinions may be with regard to the relation between art and photography, the fact remains that not one of us should neglect the opportunity to enrich his knowledge of the beautiful in painting, sculpture and design. If we train ourselves to know and to appreciate beauty, we shall be the better able to include it in our own work. It should be remembered that we cannot make others feel that which we do not feel ourselves. There must be the deep, true conviction of the heart;

otherwise, our efforts become cold and lifeless. To know and to understand the inspired work of others is to make possible, in our own hearts, a grasp of the fundamentals that govern the world. In short, we approach a spiritual conception of all things; and, by so doing, we become better men and women, and better photographers.

Another opportunity that might be mentioned is the matter of visiting reliable photographic dealers, getting acquainted with them and inspecting the latest and most improved photographic apparatus. To be sure, it might not be possible to purchase all the attractive equipment on display; but to know the standard cameras, lenses, shutters, plates and films by name is a very great help. Then, too, it is part of "our business" to know the working-tools of the profession. It should be self-evident that these visits of inspection should be so timed that the dealer or salesman is not inconvenienced or prevented from waiting upon such customers as wish to make purchases. There are very few dealers or manufacturers who will not be glad to extend the courtesy of inspection, provided the camerist does not abuse the privilege. Needless to say, much valuable information may be obtained in this manner and the worker will be making the most of another opportunity. A case in point is that of a well-known New York photo-supply dealer who held an informal manufacturers' exposition recently which was greatly appreciated by his customers.

In conclusion, then, let the ambitious camerist determine without delay the photographic course he wishes to pursue this winter and let him resolve to keep faith with himself. There is no finer hobby and no finer profession in the world than photography. However, to succeed in it one must neglect no reasonable opportunity to study, to experiment and to put into practice the fundamental principles of all success. In these modern days of "scrapping" old ideas and building anew, it is encouraging to know that success may still be achieved in the same old-fashioned way.

A. H. B.



HELPING MOTHER MELVIN C. PARRISH
SECOND PRIZE—BEGINNERS'
COMPETITION

Selling Artistic Enlargements

EDITOR OF PHOTO-ERA: Ever since I have subscribed to your helpful and ably edited magazine—I began in 1908—I have observed that many amateurs are desirous to sell prints (enlargements) from some of their choice negatives to help pay for the materials used in carrying on their hobby. In order to make this possible, you have published a series of articles dealing with that matter, by F. C. Davis. You, too, have pointed out several easy, practical ways showing how such workers may dispose of their pictorial prints; but the list of sources has been by no means exhausted.

When it comes to pictorial subjects that are original and attractive, subjects that cannot be found in any picture-store, there is hardly a worker with a commercial instinct who would not be willing to sell them, indirectly, and at a good profit.

I recently had occasion to transact some business with my insurance-agent. The walls of his office, once bare, are now adorned with a number of beautiful, enlarged photographs, simply and tastefully framed. Attracted by the exceptional, artistic beauty of these

pictures (wood-interiors), I began to ask questions, and was told that they were left on sale by a local amateur photographer. As the price of one of them (16 x 20 inches), including the frame, was only fifteen dollars—the price I was willing to pay for a framed picture at an art-store, and to be used as a wedding-present, and as, furthermore, I was assured that the photographer made it a point to sell only one print from any one of his negatives, thus giving it an exclusive character—I bought it on the spot. I learned afterwards that this picture, a sunlit woodland-road, had given the bride more real pleasure than any of her many wedding-presents. A relative of the bride was so taken with the picture, that she tried to buy a duplicate—a replica, you would call it—but without success! She selected another subject, but greater in size and price, obtaining it from only one source—my insurance-agent, who, having a large *clientèle*, averages six sales a week! As soon as one picture is taken off the wall, it is replaced by another in a few days. Each buyer, however, is obliged to take the picture as it hangs on the wall—no packing, no messenger, and no express. In this way, he is saved the usual trouble of the picture-dealer, and the commercial element is minimised.

Now, this is a good, practical hint for those to whom it may appeal, and can be added to those which appeared in PHOTO-ERA MAGAZINE, of late. Moreover, what one insurance-broker can do, is easy for another to imitate—unless he is above making a few honest dollars on the side. It is very little trouble to him. He merely takes the picture down and the customer or client takes it away. Another picture automatically takes its place within forty-eight hours or so. Lastly, why shouldn't an artistic side-line, like this, appeal to the real-estate agent? I thank you.

W. M. S.

Blundering Again

It is hard to explain how it is that whenever the daily papers make any reference to photography, that reference is invariably fatuous and inaccurate, says *The Amateur Photographer* editorially. Last week *The Evening News* included among its photographs of a public ceremony one in which the body of the chief official present appeared semi-transparent, owing to movement or double exposure, reproduced it as "very remarkable," and added that another of its photographers got the same effect. Why a form of defect which almost every photographer experiences should be "very remarkable" we do not know. *The Manchester Guardian* is a paper of a very different stamp; but it, too, in its way has been blundering about photography. In a leading article on "The Camera as Judge," it discusses the use of photography to photograph the finish of a race, and points out that it is impracticable because "the camera is a first-rate distorter" and "one of the most specious liars among instruments." The article bears evidence throughout that the writer knows nothing of the subject on which he discourses so glibly; he does not know that it is not the camera but its misuse that is responsible for any inaccuracy, that nothing would be easier than to construct a camera which would show at the precise moment when the exposure was made, the exact relative position of every part of each contestant in its field of view, and that the reason why photography has not been more used for race-recording is merely that it is an unnecessary elaboration. The movements of horses or of men are slow enough for the unaided eye to observe them; but if they were not, then the camera would become a necessity. Nor would anyone think of questioning the absolute accuracy and impartiality of its record.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Diapositive Plates in Warm Tones

PROF. NAMIAS reports in *Il Progresso Fotografico* that the following glycin-formula gives very warm tones in developing diapositives:

Glycin.....	5 grammes	77 grains
Sodium sulphite (cryst.)....	12½ grammes	200 grains
Potassium bromide 1 : 10 and borie acid 1:5 mixed in equal parts.....	34 ccm.	35 minims
Water.....	270 ccm.	10 ounces

Metol-hydroquinone also gives beautiful tones with a retarding solution, preferably by the following formula:

Metol.....	1.5 grammes	22 grains
Water.....	1,000 ccm.	35 ounces
Hydroquinone.....	7 grammes	¼ ounce
Sodium sulphite.....	60 grammes	2¼ ounces
Sodium carbonate (dry).....	30 grammes	1 ounce
Potassium bromide.....	2 grammes	30 grains

Retarder

Sol. A:		
Ammonium bicarbonate.....	10 grammes	150 grains
Ammonium bromide.....	10 grammes	150 grains
Water.....	100 ccm.	3½ ounces

Sol. B:		
Sodium hyposulphite.....	10 grammes	150 grains
Water.....	100 ccm.	3½ ounces

By protracting the exposure and changing the proportions of the mixture as shown in the following table various tones can be produced:

Warm black: exp. twice normal; 7 pts. developer. ½ pt. sol. A	
Sepia: exp. 3½ times normal; 6½ pts. devel., 1½ pts. sol. A.	
Brown: exp. 3 times normal; 6½ pts. devel., ½ pt. sol. A.	
Warm brown: exp. 5 times normal; 6 pts. devel., 1 part A. 1 part B.	
Purple: exp. 10 times normal; 5½ pts. devel., 3½ pts. A. ½ part B.	

It should be noted that the tone will vary somewhat with different emulsions.

Reduction with Persulphate

It has long been known that a solution of ammonium persulphate will reduce a negative in a manner altogether different from that in which the ferricyanide and hypo-reducer works. According to *The Amateur Photographer* this last seems to clear off the deposit equally from dense and less dense parts, with the result that the delicate details in the shadow-parts are eaten away before the highlights have been appreciably lightened. It is therefore unsuitable as a reducer for overdeveloped negatives; its action making them ac-

tually appear harder than before. With persulphate, however, this does not take place. The persulphate seems to act proportionately to the quantity of deposit present, taking comparatively little off the thin parts, and a good deal off the dense parts. Its action, therefore, is to undo the work done by the developer; so that it forms a very effective remedy for overdevelopment. It has not been used as much as it might, however, because its action was not always very regular; and to judge from a recent communication by Dr. Higson to the Royal Photographic Society, this may be due to chlorides in the water used to dissolve it, or left in the gelatine of the negative itself by the washing water. Almost all water, except distilled water, will be found to contain chlorides. If the negative is given a preliminary soaking in distilled water, and this is also used to make up the solution of persulphate, one might expect regularity of action. We do not favor the use of any solution which involves re-wetting a negative, when once it has been dried; there must always be some degree of risk about it. But there are occasions when it may be necessary, and this is one of them. The reduction is carried out, as is well known, by a freshly prepared solution of ammonium persulphate of a strength of, let us say, 10 grains to the ounce of water. When it has gone as far as is thought desirable, the negative is placed for a minute or two in a weak bath of sodium sulphite (2 per cent.), washed, and dried.

To Preserve Amidol Developers

IN a series of experiments with amidol developers L. J. Bunel has found that lactic acid has the property of retarding considerably the oxidation of these developing-solutions when exposed to the atmosphere. Equal quantities of the following solutions were placed under observation in glasses: I. water 100 ccm., sodium sulphite (dry) 3 grammes, amidol 0.5 gramme; to this was added 1 per cent. of lactic acid (official solution, density 1.21); II. the same developing-solution with the addition of 0.5 per cent. of lactic acid; III. with the addition of 0.1 per cent. of lactic acid; IV. the same amidol solution without lactic acid. Developers I. and II. discolored very slowly when exposed to the air, even for several days; developer IV., on the other hand, very soon became of a dark-brown color. No. III. discolored uniformly, but quite slowly.

The presence of this small quantity of lactic acid did not affect the developing-power of the solution in the least. For a good-keeping amidol developer the following formula was found to be specially recommendable:

Water.....	1 liter	32 ounces
Sodium sulphite (dry).....	30 grammes	1 ounce
Amidol.....	5 grammes	75 grains
Lactic acid sp. gr. 1.21.....	5 ccm.	85 minims

In half-filled bottles, corked but opened from time to time for use, this developer in seven weeks took only a slight discoloration similar to champagne. An increase of the lactic acid gave no advantage.

Bulletin de la Société Photographique Française.



OUR CONTRIBUTING CRITICS



LOWRY HALL

W. M. POWERS

YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the last day of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

This picture is so good that one wishes that there were more of it and that it were better done. Barring certain defects, it is simple, quiet and effective in its main idea. The background is natural and harmonious. The number of pleasing vertical lines—not at all geometrical—lend an air of dignity which adds to its charm. To one familiar with woods, the whole scene is delightful. However, the mind of the beholder is unsatisfied with the part of the bridge only. There is a sense of incompleteness, and one asks instinctively: Where is the rest of the bridge? Do normal, everyday bridges have only one approach?

The background is dense forest—why so light in tone? Whence comes that mist or dust in the background which is not visible in the foreground? Clearly it is not mist, and if it is dust, what is there in the surroundings to suggest dust? The highest light is the floor of the bridge—naturally. The deepest shadow is under the bridge—quite properly. But why doesn't the deep forest in the background cast deep shadows?

The data say $1/25''$ at F/6. Nevertheless, the picture is clearly a case of overexposure, flattening down the gradations, falsifying pictorial values in light and shadow. Either the artist's shutter was wrongly marked or he had a marvelously fast plate!

E. L. C. MORSE.

MR. SMITH's presentation of "A Rural Bridge" is pleasing indeed. There is something inviting about it—an urge to climb up the bank and onto the bridge. The light tones of the group of trees at the left are an effective balance to the white roadbed, although this particular bit of natural beauty being included detracts from the bridge as the center of interest. By eliminating this group of trees and slightly reducing the roadbed-tone, on the negative, the bridge alone would produce a truly attractive picture. The darkness under the bridge is natural, and a longer exposure to penetrate this would also lend an undesirable prominence to the picturesque distance. By making the exposure at some other time of day, a more accurate presentation of shadowed foundation and water, now lost in darkness, could probably have been obtained. However, accuracy is not considered by everyone as artistry.

EDITH A. MCCRAY.



THE PICTURE CRITICISED THIS MONTH

MR. SMITH has made a very admirable picture in his "Rural Bridge". However, I should never use the enlarging-paper he did, for a contest-picture. There are other grades and makes which have greater tonal values and are better for such a purpose. I always test a picture by leaving it in a conspicuous place for a week; and, if it looks as good to me at the end of the week as it did at the beginning, I consider that it is at least passable. If Mr. Smith's picture were subjected to that test, I fear that I should weary of the cold tones, the numerous unbroken vertical lines and the dark railing running the whole length of the picture—nearly cutting it in two. These latter difficulties might be overcome by trimming about an inch from the top; the former by softer printing. The trees at the left vie with the bridge in holding the interest; and, if the whole left side of the picture had been made darker it would tend to halt one's eyes from literally rolling out of the picture. I think that by enlarging through a soft-focus lens and trimming, this would turn out to be a beautiful little picture.

O. S. SAWYER.

MR. SMITH's picture of the rural bridge on the whole is pleasing, yet a viewpoint several feet higher and a little to the left would have improved the appearance of the bridge and road. The group of trees at the edge of the water, in the left of the picture, draws the eye away from the bridge. However, by trimming, say, seven-eighths of an inch from the left side, they are eliminated, and the composition of the picture is somewhat improved. The nearly horizontal line of the railing cuts the picture in two, and this detracts somewhat; but the higher viewpoint, first suggested, would improve this part of the composition.

Although I do not know what the view would be if made on the same side of the brook—but from the other side of the road—there is a possibility that with the sun more nearly behind the camera there would be more detail in the water under the bridge, instead of the dense shadow that now is present. Perhaps that would improve the effect of the picture on the beholder, for I know that there are some very interesting light-and-shade effects under these rural bridges at certain times of the day.

A. L. OVERTON.

MR. SMITH is to be commended for his effort to make a picture of common-place material—a subject which, without its environment, would not appeal to the camerist. As a record, it would hardly be worthwhile and, as it is evidently an attempt at the pictorial, it must be judged from that standpoint.

The picture has fine tone-gradations; but the general effect is one of flatness due to mid-day lighting, as shown by the shadows on the posts which support the railing over the bridge and by the density of the shadows under the bridge, lacking desired luminosity.

The view-point is too near, causing a distorted perspective of the bridge and its abutments, and should be lower, thus diminishing or, better, eliminating the mass of highlight on the bridge-floor.

A better picture would have been obtained at a time of the year when leaves were on, thus concealing the many straight lines of tree-trunks and the highlights at the top, the interlacing branches and the innumerable stems in the foreground and around the bridge which mess up the picture considerably.

The bridge itself is too near the side and runs out of

(Continued on Page 328)



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE views which accompany Mr. Riley's eulogy of the New England State of New Hampshire as a center for winter-sports, including photography, are self-explanatory. They present attractive camera-material in a straightforward manner; yet, this same material will lend itself readily to the treatment of other interpreters whatever their style may be. In his rather brief article, the author has not led his reader into the wilder sections of the Granite State; but these have been referred to by other writers in the past and are therefore familiar to most of our readers. The way, however, is shown how subjects of ordinary interest may be presented to admirable advantage by utilizing favoring conditions of sunlight; and here the photographer displays the results of careful observation and the study of spacing, balance and perspective which are so necessary to the success of an artistic photograph of a winter-scene. Data are contained in the writer's article.

Conspicuous among many indoor-activities with the camera are children's pictures. A delightful example of this kind of work is Frank I. Peckham's "The First Lesson", page 296. The critical observer, no doubt, would like to see a little more margin at the top, a pillow lower in tone at the right and the removal of the patch of sunshine on the floor in the same locality. To this implied desire, the artist will probably assent. The technique of this engaging scene is quite adequate, the modeling in the child's dress being specially good. The original print received Honorable Mention in the "Child-Studies" competition last June. Data: March 6; 4 P.M.; bright light; Turner-Reich Anastigmat F/6.8, series II, No. 4; at stop F/6.8; 1 second; Hammer D.C.; pyro; print, Professional Cyko.

The pictorial possibilities in the Arnold Arboretum, Jamaica Plain District, Boston, are convincingly demonstrated by Allen H. Bent, pages 298, 299 and 301. This beauty-spot of the Hub, so admirably described by Mr. Bent, an official of the Bussey Institution, of which the Arboretum is the park, presents rare pictorial effects at all seasons of the year, but has not yet been exploited by the camerist. However, after Mr. Bent's exhaustively described and delightfully illustrated article in this issue of PHOTO-ERA shall have been enjoyed by camera-users, the Arnold Arboretum will undoubtedly become a strong magnet of photo-pictorialists from near and far.

How to convert a daylight marine into one of night is told with praiseworthy clearness and success by that master-technician, E. M. Barker. No greater pictorial contrast between two pictures of virtually the same subject, than those so effectively displayed on pages 303 and 304, could be imagined. In the light of friendly comparison, it would be difficult to decide which to admire the more, Mr. Barker's brilliant artistic ability or his generosity in revealing to the reading public his own and extremely clever *modus operandi*. Whatever data may be desired will be found in Mr. Barker's comprehensive article. The sense of bigness, freedom and distance is superbly expressed in the daylight scene; whereas the solemn and majestic beauty of the moonlight-view plunges the beholder suddenly into a serious, profoundly meditative mood. The latter

picture, with its sombre tones, dominated by a picturesque, glorious moonlit sky, will doubtless find a larger number of admirers than its sunny and more cheerful companion. As examples in the art of picture-making, both pictures are brilliantly successful.

The crescent-shaped design of E. P. Tinkham's woodland-stream, page 307, with its beautifully rendered perspective, fills the eye with delight. If the artist, in making another print of this charming subject, were to retard the deep shadows in the tree-branches, as they approach the upper margin, he would avoid a tendency toward top-heaviness and thus impart a greater degree of security and balance to his picture.

Data: August; 5 P.M.; bright sunlight; 8 x 10 Seneca view-camera; 12½-inch Rapid Convertible; stop, F/16; quick bulb-exposure. 8 x 10 Cramer Inst. Iso; M.Q.; print, Artura Iris C.

More expressive, if not more convincing, than the conventional poem or editorial, is Mrs. Cassidy's interpretation of the true spirit of Christmas, page 309 and the front-cover. The beautiful spirit of giving to those who are needy and deserving is the theme of the artist's present pictorial effort. The two girls are the recipients of their host's generosity.

Mrs. Cassidy is uniformly felicitous in her artistic conceptions, and a mistress in the expression of emotional qualities and the application of the rules of art. Her present picture is proof of this statement.

Data: December; 1.30 P.M.; sunlight from baywindow in dining-room and electric light from ceiling; 5 x 7 Auto Graflex; 8¼-inch Goerz Dagor; at full opening; Standard Orthonon; tank—Eastman Developing Powders; print, Wellington Chamois; enlarged from central part of 5 x 7 negative.

As the terms, "photographers' Mecca" and "amateurs' paradise", have been greatly overworked, and deserve a much-needed rest, I will simply say that the famous little town of Rothenburg, in Bavaria, offers more quaint and artistically fascinating picture-material than almost any city in central Europe. To be sure, it is essentially architectural, representing, as it does, three ancient periods of construction—the Xth century or earlier, the XIIIth and the XVth centuries. On my first visit to Rothenburg in 1903, I carried no camera. This oversight induced me to revisit the old town, in 1909, when I spent a whole week, exploring, admiring, photographing. I was favored with ideal weather and took my time in selecting the choicest bits of the town's great wealth of pictorial subjects. The results of this eminently successful visit have been recorded by word and picture in PHOTO-ERA of February, 1910. It may be well that that article, with its numerous illustrations, was published; for, to me, priceless negatives and prints have mysteriously disappeared.

But to interpret the true spirit of Rothenburg in a masterful manner was left to that gifted camerist, Dr. Adolf Eyermann. Living in Munich, but a short distance from the ancient city above the little stream called the Tauber, Dr. Eyermann made it one of his favorite diversions to visit the place and make his own souvenirs. One of these characteristic impressions—a peasant-woman with a wheelbarrow—appears on

page 312. How well and how effectively has the artist placed the figure in his picture!

Data: May; 9 A.M.; sun facing camera; Linhof camera (6.5 x 9 cm.); Dr. Stäble Polystigmat; focal length, 13.5 cm.; stop, F 6.3; 1/50 second; dryplate; Brenz-katechin; print, self-prepared drawing-paper (gum-print).

Since writing the above, news has reached this country of a disastrous fire which wiped out a considerable part of Rothenburg. Among the losses were the ancient costumes worn by participants in the town's annual historical pageant, made familiar by picture postcards of which nearly every visitor including myself has procured a collection. If rebuilt, the destroyed section will be strictly in harmony with the ancient, prevailing styles of architecture.

Advanced Workers' Competition

THE "Parks" competition was a disappointment—not in the number of entries, but in the character of the subjects. Hence, no first prize was awarded. The best picture in these competitions does not always represent a high standard in thematic originality and artistic interpretation.

Alexander Murray deserves credit for choosing obviously winter-weather, and not a conventional summer-day, in order to portray the attractive character of Boston's Park System. Page 315. By the way, Mr. Murray's picture was made in close proximity to the Arnold Arboretum described and pictured elsewhere in this issue. While showing good judgment in having the smaller of the two figures appear on the outside, the artist may be interested to know that a member of the jury would like to have seen a portion of the foreground corresponding to one inch in the reproduction trimmed off, so as to lower the position of the equestrians and not divide the picture into two equal parts. The play of sunlight on the path and the fine atmospheric quality are outstanding features of this attractive winter-scene.

Data: Metropolitan Park System, Boston; January; 2:30 P.M.; bright sunlight; Vest-Pocket Kodak (1 3/8 x 2 1/2); 3-inch Meniscus; stop, No. 2; 1/25 second; Eastman N. C. film; Amidol; enlarged on Defender Velours Black.

"Norway Pines", a section of Bemidji Park in Minnesota, page 316, is a delightful characterization of a wood-interior and one of the best things from the portfolio of Beatrice Bell. The sunlit road has been managed with artistic discretion by this capable and versatile pictorialist, and demonstrates conclusively that a well-constructed foreground is often the making of a picture.

Data: September; 11 A.M.; Graflex; Smith Semi-Achromatic Doublet; stop, F 8; 1/10 second; 8 x 10 Azo print.

Beginners' Competition

In "August-Shadows", page 321, a camerist of limited experience demonstrates a new sincere appreciation of what constitutes a subject of pictorial beauty. It is easy to see that without the present shadows which fall upon it, the white-painted house would present but little artistic interest. Viewed critically, the picture, already a subject worthy of an artist's serious consideration, needs but light clouds added to the empty, monotonous sky, and a lowering in tone of the white surface of the adjoining domicile in order to be regarded as a faultless, artistic effort.

Data: August 20, 1922; bright sunlight; 4:30 P.M.;

3A Kodak (postcard-size); stop, U.S. 8; 1/25 second; Eastman N.C. Film; pyro, tank; 8 x 10 enl. on P.M.C. No. 9, Double Weight.

"Helping Mother", page 322, seems to indicate that its author has an interpretative ability that deserves to be encouraged and directed. The child appears to be pausing in its laudable work, although a cynic might be tempted to remark that the contemplated action is not entirely spontaneous; that Gloria is about to obey her mother's gentle hint to sweep the front-door step. A lack of clearness in the definition prevents the observer from discovering the child's facial expression. It would be interesting to know Gloria's mood at the present moment. Here's hoping that she is a helpful, obedient little girl and that the step will soon be swept clean!

Data: June; 11 A.M.; bright light; 3A Premo; 6 1/2-inch Eastern Anastigmat; stop, F/6.3; 1/25 second; Kodak Film Pack; Duratol for films and paper; print, Artura Carbon Black Studio Special.

Example of Interpretation

THE maker of pictures for the "Portraits" competition is likely to encounter a number of difficulties. One of the chief of these is the management of the light in order to produce good modeling and a pleasing likeness. The example worthy of study and emulation, by Alice G. Baumann, page 318, shows how an adequate degree of diffusion of the light may be obtained, as it filters through the vine.

A good way for the inexperienced worker is to practise on a plaster-cast of a bust, preferably of a woman or a beardless man. The kind that is tinted (ecru shade) is eminently suited to these experiments. After a fair degree of proficiency in lighting has been acquired, the student may make sittings of living models, and apply the lessons he has learned in connection with the plaster-cast. It is assumed that the worker has kept a record of his successful experiments, so as to proceed intelligently with his serious sittings.

Data: Made at 11 A.M.; bright sunlight; 4 x 5 Graflex camera; seven-inch Wollensak Verito F/4; stop, F 8; exposure, 1/10 second; plate, 5 x 7 Seed 27; pyro; print, Gevaert Orthobrome, from which a 7 x 9-inch bromide enlargement was made.

Our Contributing Critics

THE view of a building in a landscape-setting, by W. M. Powers, page 324, is open to public criticism. Data: Lowry Hall, Kent State Normal College, Kent, Ohio; August; 3 P.M.; bright sun; 5 x 7 Premo fitted with Symmetrical lens; stop, U.S. 128; 1 second; Seed Graflex 60; Elon-Hydro; print, Azo No. 2.



At the Optician's

"I WANT to look at a pair of eyeglasses," said the young woman with a determined air.

"Yes, madam," said the optician.

"While visiting in the country I made a very painful blunder which I never want to repeat."

"Indeed! Mistook a stranger for an acquaintance, perhaps?"

"No, not exactly that. I mistook a bumble-bee for a blackberry."

Our Contributing Critics

(Continued from Page 325)

the picture. It should be placed nearer the center, and be diminished in size.

Stop F/6 was too large, and attempting to balance matters by focusing on the farther abutment was wrong. A smaller stop, and more time—as the camera was on the shadow-side—with the use of a soft-focus lens would have given a better effect.

J. W. ADAIR, M.D.

YE Criticism Editor made bold to say that we readers would find it difficult to discover anything seriously wrong with "A Rural Bridge". Compared with previous pictures for criticism, this print may well be considered perfect. But, unfortunately, it must be judged by itself alone—and we find several faults. Most noticeable is the dark-shadowed bridge-railing that cuts through the middle of the print. It spoils an otherwise good composition. Perhaps this can be remedied by touching up the negative; but I doubt it.

Another offending line is that given by the leaning support near the middle of the bridge. A hammer could have removed that—before exposure. There is not enough of the bridge that shows and I believe that the viewpoint is a little too low. Still another distraction is the group of trees to the left; they draw attention from the "Rural Bridge". Trim these off! The technical work is excellent; and, on the whole, the picture lends an air of rustic tranquillity that will appeal to the out-o'-door photographer.

GEORGE A. BEANE, JR.

YOUR first impression is one of interest. Then your eye becomes disturbed by too many horizontal lines with little or no contrast. The bridge underneath is attractive; but you are pulled abruptly to the hair-like bushes at the lower-left corner, which are of not enough interest to hold you. The same is true of the right corner. The slanting board in the center of the bridge brings you to a short stop, while the railing of the bridge carries you on. With a little retouching of the negative and some special care in printing, this print could become an interesting picture.

JOSEPHINE M. WALLACE.

THE technical side of Mr. Smith's picture is admirable; but, again, the fault is like many that appear for criticism each month. The composition is faulty, the trees at the left appear to be as if sawed off and laid on the water; yet, they give rise to help the short-focus at the bottom left.

On a moment's glance, we find that the railing of the bridge is the main attraction, boldly showing out across the view. I think that a picture made from the front of the bridge would have had two rails going from top to bottom. Now take the path on the bridge,—looks as if there were a path coming from the west and branching to the north; in other words, the bridge seems to have no foundation for the path.

The loose beam on the bridge is another cross-line that makes the bridge appear unsafe to cross. Here, we may say that a figure put in the picture, at the right, would have taken a lot of the prominent path out. This picture looks to have been made late in the autumn—leaves are gone; bare are the fir-trees in the rear. A lovely picture would have resulted in winter or in summer; but with apologies to the artist,

who probably has not had a chance for a winter's result, we can grant an exception. Getting back to the railing, we wonder how far it continues along. Does it go right through the woods? Looking at the water, it appears to run toward us; then, why the railing going away from the water to protect some property instead of passers-by over the bridge? These little items are hard to see or even notice when looking through the groundglass (when made with a plate-camera), and more baffling with a roll-film. The artist, when seeing a picture of his own, can hardly believe the faults he may find himself; yet, he cannot say it was not like that when he photographed it. 'Tis true; the camera never lies.

JOHN JAMES GRIFFITHS.



A Safe Place for Prints

THERE are many amateur photographers who make beautiful pictures which are well worth preservation for their own sake, as well as for the pleasure which they may afford to others. It is unfortunate that so many camerists neglect the important duty to mount prints in a well-arranged photo-album. In years to come, a collection of photographic albums, properly titled and arranged in sequence, will prove to be a veritable mine of delightful reminiscences and records of days afield. Moreover, there is the sentimental side which should not be forgotten, because time is relentless and sooner or later our nearest and dearest must bid us farewell. Then these photographs become priceless, all of which brings us to suggest that our readers obtain without delay the latest Housh catalog of albums, photographic mounts and calendars. This may be obtained by writing to the Housh Company, 17 E. Concord Street, Boston, Massachusetts. Last, but not least, we feel called upon to mention the importance of filing negatives, systematically and safely; and this may be accomplished quickly and effectively by using the Housh Film-File. We have one in use at our office and we have proved to ourselves, and to others, that this device is one of the most complete and satisfactory negative filing-systems for films that we have found. We commend it heartily to the attention of those camerists who value their negatives.

That Photograph-Album

"THERE's something that's 'round the turn of the stair;
There's something that brightens each worry and care;
There's something that helps when things seem blue;
That something?—Ah, 'tis but a mem'ry or two.

"Out of the gloom comes sunshine and light.
There is no darkness, no sadness, no night,
When fond mem'ries arise, so clear, so true,
And send forth faces that in the past we knew.

"So hail before you those fast falling powers
Of gloom and sadness—and in twilight-hours
Bring forth your album and gaze at last
At those fond mem'ries of a glorious past.

"Forgotten?—Ah, no, too clearly we see
Faces of friends—thus ever to be;
And we close the book with a long-drawn sigh.
What changes life makes—as the years pass by."

MARGUERITE E. FOOTE.



ON THE GROUNDGLASS

WILFRED A. FRENCH



A Member of the Pyro Club?

EDITOR OF PHOTO-ERA: As I called at Geo. Murphy's, one day in September, leaving an order for a carbon enlargement of considerable size, I witnessed an episode in which figured what may have been a member of the Pyro Club "doing" New York. This individual was distinguished by a narrow-brimmed derby-hat and a brilliant-green necktie. He produced from his handbag an alleged bromide enlargement, saying that he "wasn't good at that sort of thing. Wasn't stuck on the print anyhow." He added that he had heard of this place making A No. 1 enlargements and guaranteeing the work (all of which was quite true); had just come from a small town, up state, where no one does any bang-up work. Size wanted? "Well; about 16 x 20, sepia—just like that ripping print on the wall, over there! Want it as a Christmas-present for our minister's study," replied the up-state man. "Now as to the price—\$2.25 mounted. "Cheap enough!" said the up-state man, "I'll leave the order right now and pay for it in advance. Here's your money." "That's all right. Now let's examine the negative," said the clerk. "Sure thing," replied the customer, taking from his grip a small, flat package which he opened carefully, revealing a brown envelope. From this he extracted a folded piece of cardboard, opened it, looked blank, then into the envelope, along the counter, on the floor, ransacked the grip, turned white, then red, and finally explained, rather dolefully, "I must have left it at home; 'cause it ain't here!"

Yours truly,

J. E. EDWARDS.

Practical Diplomacy

A good story is told of a leading portrait-photographer of New York City, a story which illustrates the tact and fore-sight which spell good sales-manship. The wife of a sitter of a few days before entered the studio, showed a set of proofs of her husband and said, "I am sorry, but none of the family is satisfied with these pictures, so I can't give you an order." The portraitist was equal to the occasion. He replied, "I am sorry, too, Madam. I don't expect you to give an order when the work is not satisfactory." Then, picking up one of the proofs, holding it up and looking first at the proof and then at a fine reproduction of George Washington by Stuart, which decorated one of the walls of his studio, he remarked with a tone of pride in his voice, "Strange! but do you happen to notice a similarity between your husband and George Washington over there?" Glancing critically at the proof in the photographer's hand and then at Stuart's portrait of George Washington, the lady said, nodding her head approvingly, "I don't know but I do. Now that you've mentioned it, I can see considerable resemblance. May I ask how much you charge a dozen?" "We do not sell them by the dozen, Madam; only by the single print, which is ten dollars," sweetly replied the artist. "Then I'll leave an order for ten prints." Thus, and happily, ended the interview.

Alphonse and Gaston

It was a touching scene that I witnessed recently in an inward-bound subway-car as it stopped at Massachusetts Avenue Station. Two Frenchmen, each carrying a closed folding-camera, approached the center-doors. Noisily the doors opened. With a polite wave of the hand each Parisian invited the other to go first. "*Mais non, mon ami. Après vous!*" gently but firmly protested the other. "*J'insiste. Moi, après vous!*" exclaimed his friend. "*Descendez vite, mon cher!*" entreated the first Parisian. "*Que voulez-vous, mon cher Henri. C'est vous!*" urged his friend with much fervor. "*Mon cher, je vous en prie—* but before the latter could finish his plea, the doors closed and the car containing two open-mouthed passengers sped on to Copley Station.

C. C. C.

WITH delightful frequency and occasional embarrassment the three magical letters, C. C. C., assert themselves in the mail that comes to PHOTO-ERA MAGAZINE. In the earlier days of camera-activity, these letters stood for the California Camera Club, followed by the Capital Camera Club (Washington, D.C.), the Central Camera Club (Philadelphia), the Chicago Camera Club, and, latterly, the Cincinnati Camera Club. Of course, the number along this line could be greatly augmented by including the camera club of every city having the initial letter C; but there is no need of it. In the circumstances, it may be well for the sake of clarity to spell out in full the name of each club which enjoys this abbreviated form of nomenclature, particularly in view of the friendly rivalry that exists among some of the clubs that are near the top of the alphabet. As to the monthly bulletins issued by the clubs of California, Chicago and Cincinnati, it may not be inadvisable for them to effect a regular interchange; for the editors of these useful club-organs might discover opportunities for improvement. It happens, sometimes, that a word spoken in mere fun does not look very well in cold print; yet a newspaper without a modicum of humor is a dull thing, indeed.

Measuring Short Periods of Time

FRIEND FRENCH: I have seen many ways to count seconds, and am reminded of a case somewhat similar.

A Methodist minister in Maine was visiting at one of his parishioners one day, and the first morning he heard the woman at her work singing a hymn and, when he met her, he spoke of how pleasant it was to hear a person singing hymns when at her daily tasks. She replied: "Well, Elder, the fact is that that hymn is the one I boil my eggs by. It takes just three minutes for me to sing it; and when the hymn is done, the eggs are done."

Faithfully yours,

WILLIAM H. BLANCHARD.

October 10, 1922.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



Portland (Me.) Camera Club

ALTHOUGH illness, and conditions beyond the control of the club, slowed up the work of the Portland Camera Club during the summer, nevertheless a small band of loyal workers have been gathering regularly at 111 High Street every Monday evening. Eighteen camera clubs submitted sets of prints. The nine clubs whose sets had the highest marks composed the interchange together with the set composed of the best pictures from the rejected sets. These pictures have been started around the circuit, each club submitting sets each month. The successful clubs were situated in Portland, Maine; New Haven, Connecticut; Reading, Pennsylvania; Cincinnati, Ohio; Cleveland, Ohio; Chicago, Illinois; Grand Rapids, Michigan; Los Angeles, California; Milwaukee, Wisconsin. Other clubs that submitted sets were situated in Hoboken, New Jersey; Baltimore, Maryland; Dallas, Texas; Portland, Oregon; Allentown, Pennsylvania; Pittsfield, Massachusetts; Wilkes-Barre, Pennsylvania. Mr. Francis O. Libby has offered a gold-and-silver medal to the member who shows the best six photographs of exhibition size, 8 x 10 or larger, on or before January 1, 1923. Mr. William Star offers a medal to the member who makes the best set, or the best lantern-slide, on or before January 1, 1923. The annual supper-contests were held during October and November. Sides were chosen with captains, the winning team to be given a supper by the losers. The conditions were that each member who participated should make one print and one lantern-slide, the same to be wholly the work of the member. The contest was held with the object of providing material for the annual exhibition which is held each year in March in the Art Galleries. From this it is apparent that the Portland Camera Club, although it has been somewhat handicapped, is still very much on the active list of the progressive clubs of the country.

Montreal Amateur Athletic Association

WE are pleased to refer to the first Provincial Exhibition held at the Club House, 250 Peel Street, Montreal, under the auspices of the Montreal Amateur Athletic Association, November 13 to 18, inclusive. This photographic exhibition was open to any one residing in the province of Quebec. The usual rules governed the competition, and the pictures were well displayed and consisted of the following six classes, open to all photographers in the district. Class A, portrait; class B, figure-studies; class C, landscape; class D, marine; class E, miscellaneous (interiors, flowers, still-life, color-process, etc.); and class F, special (any subject by juniors, boy or girl, not over 16 years of age). One prize was awarded in each class. No picture which had gained an award in any previous competition of the club was eligible for the prize. No more than six pictures from any one exhibitor were accepted. Interest in photography is increasing steadily among our Canadian neighbors and we are glad to record the success which is attending these exhibitions.

Robey-French Co.—New Management

A CHANGE has recently been made in the management of Robey-French Co. (Eastman Kodak Co.), 38 Bromfield Street, Boston. Mr. Thomas Roberts, Jr., for the past ten years manager of this well-known and popular photo-supply house, but for twenty years in the employ of the Eastman Kodak Co., goes to New York City to take charge of the Eastman Stock House, Madison Avenue, corner 43rd Street. His place as manager of the Robey-French Co. store has been assigned to Mr. George A. McLaughlin, for twenty years in the employ of this firm, i.e., since its organization, in 1902. Much of this time, Mr. McLaughlin has spent as traveling representative of the firm for the New England States and is, therefore, intimately acquainted with the professional trade in that part of the country.

The Popularity of Enlarging

APPARENTLY amateur and professional photographers are realizing more than ever before the artistic and commercial value of good enlargements. Virtually all the leading manufacturers have produced, and are producing, new and improved types of enlargers. In fact, enlarging to-day is very little more trouble than contact printing. By it, the possessor of a hand-camera is enabled to compete successfully with the owner of an 8 x 10, or larger camera. There is no question that a picture, at least 8 x 10, has greater value from the point of view of sales, than a smaller print. In this connection it may be pointed out that Burke & James, Inc., 240 E. Ontario Street, Chicago, Illinois, have recently developed and produced the Rexo Automatic Enlarger which is equipped and designed to meet the requirements of the photo-finisher and commercial photographer. From an examination of its design and equipment, it would appear that it left little to be desired in this type of apparatus. Descriptive matter may be obtained from the manufacturer; and those of our readers who are interested in this branch of photography should inform themselves with regard to this new outfit.

An Original Idea

VIRTUALLY all manufacturers and dealers pay considerable attention to the arrangement and appearance of business-cards. Obviously, this is an important detail in the general publicity given to the manufacturer or dealer in question. We have just received a business-card issued by the Sharnan Camera Works, 5 Kearny Street, San Francisco, California. The card is very neatly printed and on one side contains the name and address of the firm. On the reverse side, a simple but effective exposure-calculator appears which would be of practical value to the average camera-user. Naturally, this little device does not pretend to be exhaustive; but we find that it would suffice to meet the requirements of the average amateur photog-

rapher. This business-card and exposure-calculator will be sent to any reader of PHOTO-ERA MAGAZINE at request. In this connection it may be pointed out that this firm makes a specialty of getting out camera repair-work the same day that it is received, except in cases where the work requires unusual parts or workmanship. Those who desire to have work of this sort done, and done well, should communicate with this enterprising firm.

An Acceptable Christmas-Gift

As announced in our advertising-columns last month, we are prepared to send PHOTO-ERA MAGAZINE as a Christmas-gift this year, the same as we did last year. We know that your friend the camerist will be delighted with a year's subscription to the magazine. We have attractive Christmas-cards bearing the following message:

The PHOTO-ERA will come to you
Bearing each month its message anew:—
That a friend sent you greetings this glad Yuletide
And hopes that its joys may with you bide.
Greetings from.....

One of these cards will be sent to you on receipt of your order for a year's subscription to PHOTO-ERA MAGAZINE, or, if you prefer, we will send it direct to the new subscriber, filling in your name.

Applying Photography to Sculpturing

WE believe that our readers will be interested in a new pamphlet issued by W. F. Engelmann, Mechanical Engineer, 832 E. 51st Street, Chicago, Illinois, entitled, "A New Sculpturing Method". This pamphlet describes in detail the machinery and method to make accurate reproductions of human heads and faces in different materials and in different sizes, at small cost. It appears to be an entirely new line of commercial endeavor and may become the basis of a new and desirable industry to be known as the photo-sculpturing industry. The fact that photography is used in the method links it, to a certain extent, with the science of photography. It will be of interest to many of our readers to note the ingenious way in which photography is applied; and, whether this new method of sculpturing develops eventually into an industry or not, it will be of value in showing how the camera is making its way into virtually every art and science.

The Wilkes-Barre Camera Club

At the 22nd annual meeting of the Wilkes-Barre Camera Club held at the club-rooms, Poli Building, 131 South Main Street, Wilkes-Barre, Pennsylvania, the following officers were elected for the ensuing year: president, James H. Prideaux; first vice-president, Anthony G. Reisser; second vice-president, George M. Reed, executive committee, William H. Evans, George H. Leach, Jr., treasurer, Albert Williams, Jr., and secretary, Harry J. Powis. The club now has a membership of thirty and is growing in influence in the community. Meetings are held every Tuesday evening. Print-competitions are held on the second Tuesday evening of each month and at these meetings buffet lunches are served. Lantern-slide exhibitions, club-work and other activities are held on the fourth Tuesday evening of each month. Visitors and friends of club-members are always welcome.

Dallas Camera Club

ONE by one, camera clubs in all parts of the United States are finding it of benefit to publish some form of club-bulletin or house-organ. The latest that we have received is *Proofs*, issue by the Dallas Camera Club, Dallas, Texas. Although still in a rather formative stage of development, it promises to grow in size, appearance and influence.

By a vote of the members it was decided to incorporate the club, and the necessary legal steps are now being taken. Moreover, for the present, the club voted to exclude women from membership. According to *Proofs* there is much on the program for the fall and winter months.

Lenses—In Use

UNDER this title a new number of *Photo-Miniature* has made its appearance; and, after reading it carefully, we find that it contains much practical lens-information for the benefit of the worker who may not have the time to go deeply into the subject. Virtually every lens-term is mentioned and explained, and this is followed by an interesting description of the best types of lenses for all manner of photographic work. In short, if the reader is interested in interior-photography, he will look up the heading "interiors," and under that heading he will find a list of lenses suited to this work. Again if he is interested in "groups and figures", under this heading he will find a number of lenses mentioned. Inasmuch as a clear and practical understanding of the lens is of vital importance to the photographer, we believe that it will be well worth the time spent to read Number 187 of *Photo-Miniature*.

California Camera Club

It is interesting to note the manner in which camera clubs in various parts of the country are making rapid strides to furnish members with entertainment and educational features which are helping tremendously to increase the popularity of the clubs and likewise to encourage the use of the camera in their own communities. For example, at the California Camera Club, San Francisco, Lt. Colonel Charles Wellington Furlong gave a lecture on Montenegro, which was illustrated by colored lantern-slides and was not only of great educational value, but served to hold the attention of the audience by the remarkable pictures thrown on the screen. Readers of PHOTO-ERA MAGAZINE will recall that we have published pictures by Colonel Furlong and that his own portrait was in the January, 1917, issue.

In the *Four Finder*, the club's own house-organ, there is an interesting reference to a collapsible and home-made darkroom which was described by Chamey McGovern, a well known hand-writing expert and photographic illustrator of documents in dispute. This gentleman uses the darkroom in question in his studio in San Francisco. The features of this darkroom are, to quote from the report: "1. It is collapsible—can be taken apart in 30 seconds. 2. It is as light as the proverbial feather. Being made of composition-board with redwood-edges, one man can take it apart and hit it from its regular position in a sun-lit office, place it in an automobile, and set it up, unaided, in a court room anywhere, or in the woods. Also, it 'cheats the green landlord', inasmuch as it is readily moved by a tenant who has to vacate through increase in its rent. 3. It is cheaper—the materials costing little or nothing, any

ordinary person with a hammer and saw could make a duplicate. (4) It is unpainted either inside or out, although Expert McGovern uses it almost exclusively for developing pan-chromatic process-plates of 11 x 14 size; and (5) it is well ventilated (without a fan), there being a double-hooded intake at the bottom, with a triple-hooded outlet at the top. The sides and top are merely 'hook-and-eyed' together; the electricity cord enters through the ventilator and strips of carpeting around the bottom inside of each wall keep out all light, even when the floor or ground, or whatever the folding darkroom is placed on temporarily, is at all uneven. That the folding darkroom is a positive practicality is proved by the fact that Expert McGovern does nothing but make highly scientific negatives and prints—most of them 'fotomicrographic' or made with a combination of 11 x 14 camera and microscopes."

From this account it may be seen that technically and artistically the California Camera Club is certainly trying to make things interesting for its membership. In addition might be mentioned a print-exhibit by H. Hussey, monthly business-meeting, whist-party, picnic at Palo Alto, and a Halloween Costume party. Without a doubt, all these things help to maintain interest and cause the club to grow in influence and service.

Photographers' Guild of Boston

THE Photographers' Guild, embodied in the Society of Arts and Crafts, and composed of about seventy-five amateur and professional workers of Greater Boston and other cities, held its annual exhibition at the Society's room, 9 Park Street, October 21 to November 4. The collection of about seventy jury-selected prints included subjects of eminently great variety and was in the opinion of capable judges the most brilliant manifestation of creative ability by the Photographers' Guild. Pictures of outstanding artistic merit were numerous, such as, "Belgium Police-Dog", by Ralph Osborne; "Birch-tree", W. H. C. Pillsbury; "Portrait of a Young Girl", Harold E. Almy; "Shore-View", George S. Akasu; "Gloucester Fishing-Boats", E. Crosby Doughty; "High Surf", B. H. Wentworth; "Charles Street Church", Florence and Karl Maynard; "Chimneys at Bermuda", Livingstone Stebbins; "The Steel-Worker", Helen M. Murdoch; "Solitude", Herbert B. Turner; "Sunlit Doorway", Eleanor L. Smith; "Portrait", George S. Akasu; "Winter", Raymond E. Hanson; "Winter-Scene", Paul W. Emmons; "Portrait of Mrs. Knapp", Lillian M. Hobart; "The Coquette", Mary L. Lauffer; "Portrait", William A. Aleock; "Catching Mimnows", John Murdoch; "Mother and Child watching Bird", Louis Astrella; "The Sisters", Alice Austin; "Girls and Picture-Book", Mary Patten.

Other meritorious prints were "The Butterfly", George S. Akasu; "Canal at Chartres", E. Crosby Doughty; "Marine", E. O. Hiler; "Landscape", Mrs. C. S. Emmons. W. A. F.

Camera to Photograph Moving Objects

H. L. COOKE, of 148 Mercer Street, Princeton, N.J., has filed specifications for a British patent on a camera to make photographs from a moving body. The camera is so mounted that it can be moved continuously to compensate for the apparent motion of the object to be photographed, and may be used on air-craft, motor-car, ship or train. In the form described, a camera is mounted together with a telescope and a gyrost at in gimbal-rings, the axes of the three instruments

being parallel, and the center of gravity of the entire movable system being situated at the intersection of the gimbal-ring axes. Adjustable torques are applied to the gimbal-ring axes by adjustable springs, to produce a gyrostatic precession of the entire movable system in the desired direction and at the desired speed. Time-exposures are thus made practicable, and the camera may be fitted with a wide-angle lens.

The Photographic Exposition in New York City

WE are pleased to announce that there will be an International Photographic Arts and Crafts Exposition held at the Grand Central Palace, New York City, April 21 to 28, 1923. In the October, 1922, issue we broached the matter and suggested that the photographic industry, as a whole, would be benefited greatly by a large, well-managed exposition, to which the general public would have admittance. It is evident that the manufacturers and the dealers approve the plan, because they are all working together to make this exposition the pronounced success it promises to be. Under the experienced management of the National Exposition Company, Inc., of New York City, which has conducted motor-boat, national household, business-efficiency, printing, advertising, style, stationers', automobile and other national shows, for more than ten years, there is every reason to have confidence in the outcome. It is interesting to note the names of the manufacturers and dealers who have already signed contracts for space; and, of course, more are coming in every day.

Anasco Company.
American Raylo Corporation.
American Lux Products Company.
Abe Cohen's Exchange, Inc.
Causch & Lomb Optical Company.
C. G. Willoughby, Inc.
Frank V. Chambers, Publisher.
Gevaert Company of America.
Harold M. Bennett.
Herbert & Ihuesgen Company.
Ilex Optical Company.
John G. Marshall.
PHOTO-ERA MAGAZINE.
Presto Manufacturing Company.
R. J. Fitzsimons Corporation.
Spencer Lens Company.

American Photography Prize-Pictures

THE prize-pictures of the second annual contest held by *American Photography*, which were enumerated in our April issue, were exhibited in October at the B. Y. M. C. U., 48 Boylston Street, under the auspices of the Union Camera Club. Among the prints which attracted the greatest attention were those by Whitehead, Prior, Albee, Wood, Hanson, Krone, Baumann, Eide, Petrocelli, Aleock, Anderson, Simmons, Harris, Lovejoy, Porterfield, Swain, Sheckell, Suchy, Tutton, Reece.

A Correction

Much to our regret a typographical error occurred in the list of Honorable Mentions, page 202, of the October, 1922, issue. The name Herbert Roderick should have been Herbert Rodeck. We regret this unintentional mistake and thank Mr. Rodeck for bringing the matter to our attention.

Manufacture of Photographic Apparatus—1921

The Department of Commerce, Washington, D.C., announces that the census-reports show a considerable decrease in the activities of the establishments engaged in the manufacture of photographic apparatus, in the United States of America, during the year 1921 as compared with 1919. The total value of products reported for 1921 amounted to \$5,444,744, and for 1919 to \$9,381,050, a decrease of 42 per cent.

There was a decrease in the number of establishments which is accounted for as follows: 4 that reported in 1919 were out of business in 1921; 10 had changed the character of their products and the reports were assigned to other industry-classifications; and 6 were omitted because the value of products of each was under \$5,000. Of the 48 establishments reporting for 1921, 18 were situated in New York; 11 in Illinois; 3 each in California, Minnesota, New Jersey, and Pennsylvania; 2 each in Indiana and Missouri; and one each in Iowa, Kentucky, and Oklahoma. New York, the leading state in the industry, reported 61.7 per cent. of the total value of products in that year.

The decrease in production has been accompanied by decreases in the number of persons employed, in the amount paid during the year for salaries and wages, and in the cost of materials used. There was considerable fluctuation in the monthly employment of wage-earners in 1921. In March, the month of maximum employment, 1,684 wage-earners were reported, and in November, the month of minimum employment, 1,143—the minimum representing 67.9 per cent. of the maximum. The average number employed during the year was 1,441 in 1921 as compared with 2,555 in 1919. A classification of the wage-earners with reference to the prevailing hours of labor in the establishments in which employed shows that for 384, or 26.6 per cent. of the total (average) number, the prevailing hours per week were 44 or less; for 263, or 18.2 per cent., the hours were between 44 and 48; and 637, or 44.2 per cent., 48.

The returns indicate that the combined output of all establishments was approximately 45 per cent. of the maximum capacity, based upon a demand requiring full running-time. The percentage of output for individual establishments ranged from 10 to 100 per cent. of their maximum capacity.

High Art in Advertising

THE art of advertising by means of striking and beautiful pictures executed by brush or pencil is being superseded by the products of the camera. Of recent years, photography has taken the place of the painter and the draughtsman, to a considerable degree, in supplying illustrations for books, catalogs and general advertising. Scenes in books of fiction, which formerly were the result of the draughtsman's skill, and were more or less imaginary, are now produced by the photographer directly from nature—living models and natural scenery, and the effect is on the whole more pleasing and convincing. Photographers of taste and skill based largely on historical knowledge and artistic training are now creating pictures for advertising purposes with rich, effective and harmonious settings which challenge the creative ability and technical skill of the accomplished historical painter. To what extent and profit this new branch of illustrative photography has been developed is shown by Lejaren A. Hiller of New York and E. M. Pratt of Los Angeles, and others.

The latest artist-photographer to take up this new and remunerative activity is J. W. Pondelicek of Chicago. This remarkably clever and resourceful pho-

tographer has established himself with several associates in artistic commercial photography—i.e., specialising in photographic work for the artistic illustration of advertisements, with offices and studios at 4125 West 21st Street, Chicago. The aims, scope and ability of this new firm are set forth in a strikingly artistic pamphlet (6 x 8 inches) filled with halftone illustrations of original specimen photographs and an introduction stating the manifold advantages of photography as a means of artistic and effective publicity. The design on the front-cover of the pamphlet is a work of art in itself—an upper and lower frieze of quasi-Egyptian figures printed in blue on a deep-black background, the center of the page being occupied by a broad circle in orange and gold enclosing the letter P (Photography or Pondelicek). The recipient (a prospective customer) of a copy of this unique and attractive brochure cannot fail to be favorably impressed by the energy, ability and enterprise of this new photo-advertising firm.

Orange Camera Club

WE are glad to acknowledge the coöperation that camera-club secretaries are giving us by sending announcements, bulletins, house-organs and other interesting reports of club-activities. The secretary of the Orange Camera Club, South Clinton Street, East Orange, New Jersey, has just sent in another number of *The Stereo*, which "views club-activities with two eyes and with that peculiar roundness of vision which reveals both sides." This bulletin is neatly printed and interesting. A commendable little folder, "The Orange Camera Club and its Objects," was enclosed, and we believe that other camera clubs will do well to issue a similar folder to be used in a campaign for new members. In short, it is a clear statement of exactly what may be expected from the club and just what the club expects from its members. This is vitally important to the success of any organisation.

An Opportunity to Get a Gross of Paper

THOSE of our readers who may have negatives that are suited to the advertising-requirements of Burke & James, Inc., 240 E. Ontario Street, Chicago, will do well to submit prints to the firm's advertising-department. There are no restrictions. However, when figures are included in the picture, a release must be obtained from the subject. The negatives should be clear and sharp so that enlargements of prints may be submitted. One gross of the Improved Rexo Paper, of a size corresponding to the negative selected, in any grade or surface—will be given for every negative accepted.

Business Changes

WE are informed that Mr. Frank Wilmont, formerly of the Defender Photo-Supply Company and later of the Haloid Company, Rochester, New York, is now connected with the Rectigraphic Company, Rochester, and that this company will soon place a new general line of photo-papers on the market.

The American Photo-Chemical Company, Rochester, New York, has perfected a method of coating sheet-celluloid. A company has been formed in connection with the Celluloid Company and a factory, including equipment at Montclair, New Jersey. The efforts of this plant will be confined to radiography.

Union Camera Club of Boston

At the monthly meeting of the Union Camera Club of Boston, 48 Boylston Street, November 7, the principal business consummated was the appointment of Livingston Stebbins as secretary-treasurer of the club, replacing E. W. Gustavsen, secretary, and F. Chester Everett, treasurer, resigned.

The entertainment provided by the committee was a lecture on pictorial composition by Charles H. Reichert, a well-known Boston landscape-painter and art-instructor, who presented his subject in a manner that surpassed similar attempts made by other speakers before any camera club or photographic society in this state, within the writer's personal experience. Mr. Reichert had made careful and systematic preparations for this lecture, which were evidenced by a series of personally executed illustrative drawings, and a collection of photographs of examples in pictorial composition by the old masters. His explanation of the principles of composition and their application to painting and pictorial photography was lucid, simple and impersonal. He ignored his status as an artist, regarding himself as a student, and did not hesitate to mention and recommend well-known books on art-instruction which have served him as guides. His lecture was so well received, that there was an openly expressed desire that he appear again before the club in the near future. A greater mark of appreciation could scarcely have been accorded Mr. Reichert.

A special entertainment was given by the Union Camera Club to its members and friends and also to the members of the Boston Young Men's Christian Union, in the large lecture-hall, November 9, in the form of an illustrated lecture by William Lyman Underwood, entitled "Journeys with an Indian." The lecturer described in his usual humorous manner the ways and personal characteristics of his capable and faithful Indian guide "Joe", who accompanied him on his many journeys into the wilds of Maine for the purpose of photographing birds and animals. The colored lantern-slides from photographs made by Mr. Underwood were very much enjoyed and testified to his masterly skill as a photographer and colorist.

W. A. F.

One-Man Show of Leonard Misonne

DURING the month of November, and probably during December, 1922, Leonard Misonne of Belgium will have a one-man show at the Camera Club, New York City. This collection was made especially for the occasion and all the prints are in oil and in Mr. Misonne's inimitable style. Admission will be free.

High-Grade Cameras and Lenses

ONE of the largest and most valuable stocks of selected high-class cameras and lenses of foreign make may be seen at the store of A. Feigenbaum, 5 Bromfield Street, Boston, Mass. There are French cameras adapted to plates and film, regular sizes and stereo, from the famous workshops of Gaumont and Richard; German models of Ica fame; Folding Mentor Reflex; English Marion Soho and Newman & Guardia Sibyl styles, and many other choice models—all fitted with modern, powerful Anastigmat lenses, mostly Carl Zeiss Tessar.

Some of the cameras, of German make, are all metal, instruments of precision, beautiful in appearance and suited to the most exacting work. The display

of these superb goods is impressive, irresistible. Whether seriously interested or merely curious, all visitors are equally welcome. Mr. Feigenbaum is an ideal host and extends to all a hearty invitation to inspect the contents of his establishment.

A Step in the Right Direction

WHAT was termed an Informal Manufacturers' Convention was held October 19, 20, and 21, 1922, at the store of Charles G. Willoughby, Inc., 110 West 32nd Street, New York City. The idea was to stimulate business, and it did. Virtually all regular advertisers in PHOTO-ERA MAGAZINE were represented; and by actual count over three thousand amateur and professional photographers entered the store to inspect the displays and to talk to the manufacturers present. As Thos. A. Riggles of Willoughby's put it, "One of the redeeming features was that every photographer was in a frame of mind to absorb the information given out and was all attention. He was not figuring on getting away to a clam-bake, baseball-game or something else, as he is usually when he attends a convention." The manufacturers were delighted with the results, and plans are now under way for a similar convention next year. Is not this idea worthy of trial in other parts of the country? We think it is!

Of Interest to Lecturers

It matters little whether a lecturer is a professional or an accomplished amateur, lantern-slides that are truthfully and beautifully colored are a necessity. Often, the problem is to find a reliable and efficient colorist. In this connection, we are pleased to refer our readers to Miss Ruth W. Bunker, 74 School Street, Belmont, Mass., who has done work for us and who we know is equipped to meet the requirements of discriminating lecturers.

Photo-Micrography in Textile Trade

A LOCAL scientist of Boston, U.S.A., who is a member of the American Chemical Society, has opened a studio for the purpose of specializing in "photo-micrographic photography." His business consists of making photographs of fine instruments, textiles, jewels and other extremely small objects or details of objects for purposes of identification or reproduction.

For example, if a merchant wants a sample of cloth reproduced he has photo-micrographic photographs made of the goods showing details of the fibre in the threads, the tightness or the looseness of the twist and details of design.

Such photographs are of much assistance to the textile-maker in reproducing goods and to the purchaser in determining whether the reproduction is truthful. The photo-micrographic pictures also easily identify various kinds of threads, whether they be silk, wool or cotton.—*Reuter*.

Exhibition by Aage Remfeldt

BEGINNING January 1, 1923, there will be an exhibition of portraits by Aage Remfeldt of Christiania, Norway, at the Camera Club, 121 West 68th Street, New York City. The show is to continue for one month.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

PHOTOGRAPHY FOR THE AMATEUR, by George W. French. 417 pages. 166 drawings and illustrations. Used as a supplementary text at New York Institute of Photography. Price, cloth, \$3.50. New York: Falk Publishing Company, Inc., 1922.

It so happens that another subscriber and pictorial contributor to PHOTO-ERA MAGAZINE, who has worked long and faithfully to achieve photographic success, has arrived. We appreciate Mr. French's reference in the foreword of his book, to the helpfulness of our advice in the past; but we must add that he improved every opportunity, worked hard and steadily until he placed himself in a position to write "Photography for the Amateur". There is deep satisfaction in feeling that we were able to be of some service to the author of such a book on photography. It is different, practical, interesting and a credit to the publishers.

"Photography for the Amateur" is not an encyclopedia, nor does it attempt to be anything more than a first-class elementary textbook. It goes deeply enough

into the subject to give the reader a thorough grounding in the most important principles of the science and art of photography. In what Mr. French chooses to call "a preamble", he tells convincingly, and from the heart, what the camera means to him and his reasons for loving the art of picture-making. Then, step-by-step he takes the reader over the road of experience. After listing in detail the equipment necessary to begin one's own photo-finishing, Mr. French devotes a chapter to Cameras; Lenses; Making the Picture; The Process of Development; the Darkroom; Beginners' Troubles; Printing, Developing and Fixing the Picture; Trimming, Mounting and Making the Album; Special Treatment of the Negative; Elementary Enlarging; Special Phases of Photography; Making Solutions and Useful Formulas; Miscellaneous Pointers; and How to Make the Camera Pay.

Typographically, the book is well done. The type is large, the drawings and illustrations clear, the paper excellent and the cover, in red cloth and gold lettering, is rich in appearance. It is to be regretted that Mr. French used the expression "picture taking" instead of "picture making" in chapter-headings and in the text. Leading photographic authorities are now agreed that "picture making" is to be preferred. However, this editorial oversight in no way affects the value of the book. We believe that "Photography for the Amateur" will fill the need of an American elementary text for American readers, although, of course, the book is of practical interest wherever English is read. Unless we are very much mistaken, it will be well received by beginners and amateur photographers who are eager to make a success of photography.



FINE PRIZE-WINNING PICTURE

JOHN G. MARSHALL'S FLASH-POWDER COMPETITION

BY CHARLES H. PRIOR, PASADENA, CALIFORNIA



ANSWERS TO QUERIES



L. M. C.—Photographic Christmas and New Year's greeting-cards, in very attractive styles, using your own photographs, can be easily made, by following the directions contained in a well-written and beautifully illustrated article by Joseph Coburn Smith, which appeared in *PHOTO-ERA MAGAZINE* of December, 1920. Mr. Smith shows how greeting-cards suitable for Christmas and Easter may be made, and gives several artistic designs.

G. H. J.—A rule to mount photographs correctly was given on page 43 of the July, 1922, issue of *PHOTO-ERA MAGAZINE*, together with a diagram and detailed instructions for calculating the position for any size picture on any size of mount. We can furnish you with the July number for twenty-five cents.

R. D. C.—Most roll-films and film-packs are warranted against deterioration from eight to twelve months. The expiration-date is stamped plainly on the box, so that with due attention there is little danger that you may receive old films. If the film is to be used immediately it makes little difference, unless the expiration-date is passed.

S. D. F.—It does not necessarily follow that plates will make more artistic pictures indoors than roll-films. The difference is that plates are manufactured in various speeds and emulsions, so that it is possible to obtain a plate which is particularly adapted to the work in hand. Roll-films are issued with virtually one emulsion, which must meet all requirements. We believe that you will find roll-films entirely satisfactory for your work.

B. G. Y.—Wire-releases are much preferred to the bulb and tube. With care a wire-release will last indefinitely, whereas this is not true of a bulb and tube. Moreover, a wire-release does not blow dust into the shutter-mechanism. Releases may now be obtained in several lengths to suit the requirements. The efficiency of the wire-release is shown by the fact that most manufacturers now include it with every camera-equipment.

A. D. F.—A good background for use in photographing small animals such as kittens or puppies is a soft-toned rug, or a piece of plain dark fabric can be spread over some loose boards, or on a platform, for the animal to stand on. A packing-case makes a good stand, as the height will make it easy to use the camera, and will tend to keep the animal from walking about too much. The smaller the space on which the animal is posed the easier will be the task, as the animal cannot then get so far out of focus. Prepare everything, even to the focusing, before bringing the animal to the spot, and give undivided attention to the changing positions of the animal and when a pleasing pose is seen, release the shutter instantly.

J. F. D.—Ink-stains on old photographs are not easily removed. "Salts of Lemon"—potassium dioxalate—is the old remedy, and the most effective one. This chemical is extremely poisonous, so must be handled carefully. A solution of about two drams to the ounce of water is made, and dabbed onto the ink-stain with a brush or feather. It will soon remove the worst of the stain, but the last traces

are not so easily got rid of, and the dabbing must be patiently continued until it is clear that nothing more can be done. The print is then washed thoroughly to get rid of the last traces of the salts of lemon, and then dried.

T. F. C.—A "Bald-headed Sky" is one where no clouds show, even if clouds are really there. A ray-filter almost always improves the rendering of a sky. The important value of a ray-filter is its correction of color-values and contrasts. In mountain-photography you will find that correct ray-filter exposures on proper orthochromatic sensitive material, of course, will also show cloud-shadows on mountain-slopes whenever the sky-shading is being recorded properly.

M. H. T.—An easy way to clean old glass-negatives was recently given in the *Photo-Revue*. It was for removing the gelatine-film from the glass. The plates are soaked in a solution of common salt (about 7 or 8 per cent) for at least fifteen minutes, and then transferred to dilute sulphuric acid (5 to 10 per cent.). Hydrochloric acid is formed in the body of the film by the action of the acid on the salt, and the loosening of the film begins very soon. By means of a soft brush or stick, the dislodgement can be facilitated and the plates can be then washed and dried.

F. W. J.—It is entirely possible to make animals make their own pictures. One method is to secure the camera firmly and focus sharply on some definite spot—as the base of a tree. When everything is ready, fasten a piece of meat or other bait to a strong cord and place it where you wish the animal to be. By means of screw-eyes or other devices the string can be carried to the camera and so arranged that a pull on the string will release the shutter.



Camera Reveals "Spirit" Fakes

DURING a spiritualistic seance a Danish medium produced from his mouth a substance that he said was "teleplasma", from which naturalised spirits were formed, reports the *Photographic Dealer*. He was photographed at the moment of re-swallowing it, and the results showed that the "teleplasma" was nothing but silk gauze.

"Spirit" photographs, secured by a member of the Society of Psychical Research, have been instrumental in exposing the practices carried on by a well-known medium. By arrangement with the Imperial Dry Plate Co. four plates were obtained, each marked by means of the X-rays with the "Lion" trade-mark of that Company, a portion being X-rayed onto each of the plates so that when placed in their proper order the full design would appear. Photographs were taken ostensibly on these "prepared" plates, and on development one of them showed a "spirit," but unfortunately for the medium, the portion of the trade-mark was missing. It was later found that the plate was not one of those that had been X-rayed, and it is obvious that another, prepared by the medium, must have been substituted.



LONDON LETTER

CARINE AND WILL CADBY



BEING out of England when the London photographic shows opened, we were not able to record last month the inaugural doings; but readers have probably learned of these before this through other sources, consequently we will set down our own impressions of the two exhibitions now that they are open.

The Royal Photographic Society's show is quite up to expectations, if not somewhat beyond them. There is no doubt that the standard of photography in all branches is being raised continually. No longer do we see photographs in the Pictorial Section of the "Royal" that at a glance we should say ought not to be there, and as to the sections devoted to Natural History, Photomicrographs, Radiographs, Astronomical, Aerial, Technical, Color-work, etc., they not only possess an amazing amount of information, but are absorbingly interesting.

In the Pictorial Section, among much work which is of a high standard, we should single out Bertram Cox's landscapes as exceptional, indeed, almost as a new departure. Of course, he has long been known for his outdoor-subjects; but in standing before his "Face of the Down," which we think the cleverest of the four pictures shown, one forgets that it is the result of photography. That is to say, the medium is lost sight of in the effect obtained. It is just a hillside, with a prominent cliff in the foreground—the sort of subject that the ordinary run of people would think to be of little value—out of which Mr. Cox has produced a decorative effect of which one would never tire, because of its truth to Nature. There is something else in the individuality of the man, which has combined this fundamental truth with decorative effect, thus giving the beholder the same æsthetic satisfaction that he had from an exquisite engraving, with something added, probably the realism and truth derived from the photographic medium. At close quarters there is no actual detail; but viewed from the proper distance, everything is there. The hills are solid earth, seen through an English atmosphere, and the sky is filled with brilliance and beauty. This effect may be—probably is—helped by hand-work; but if so, there is no evidence of it, for it is all one. It hangs alongside of one of Alexander Keighley's landscapes, a well-rendered subject of the old style, and one could not help wondering how and where the difference came in—the one was all photograph, the other all picture. In Keighley's we were busy thinking how cleverly he had arranged his models, in Cox's we forgot the man in the subject presented; and we decided that technique, in the broadest sense of the word, plus vision, was responsible for the difference. We have gone rather fully into Cox's work as it appears to us to mark a distinct advance, a lifting of photography to a higher level, where it undoubtedly competes, and competes on equal terms, with the other means of graphic expression.

There are some good portraits, among which may be included one of a dog that had much of the character of the model. Herbert Lambert's studies of little children are not so pleasing as those shown last year. They suffered, we thought, from being too big. Augustus Basil has harked back to the Demachy inspiration of

many years ago in "Young Dancer," but on a smooth surface. So like Demachy's old work of dancers behind the scenes was it, that we missed the rough gum-bichromate paper he always used.

Among the technical photographs there is some wonderful work by the Forest Products Laboratory (U. S. Department of Agriculture). Three different American woods are shown, hickory, red spruce and black walnut, enormously enlarged, and the difference in the pattern is amazing. Also much is to be learned from the photographs of wood made in differing directions of the grain, across it, radially and tangentially. This whole section is filled with subjects of absorbing interest, treated in such a way that the ordinary visitor can understand and enjoy them, and many are really beautiful to look at.

The color-plates are shown this year in a more convenient manner with a new arrangement of lighting. There is also one room filled with Natural History photographs, the humorous side of which was illustrated by a large print of three giraffes at full gallop. What with their elongated necks and legs, spreading all over the photograph, they formed a most amusing picture. Even the big staircase was attractive, with some large prints of photographs made by Mr. Luboshez (of Kodak) during a demonstration on Lighting at the Royal Photographic Society. Portrait film was used, of course.

The Salon, which we visited later the same day, is going strong again this year and, what is more, is remarkably well attended. Evidently, the popular interest in photography is reviving over here. Also, there is no doubt that the Organising Committee know all about organising. There are no outstanding wonders of Camera Art; but, as a whole, the show demonstrates some interesting phases of photography, and some of the work is remarkably clever.

It is rather interesting to walk around a show, at first, without a catalog and to pick out the most extraordinary and entertaining exhibits; then consult the catalog and compare the titles with the originals. How should the bare black-and-white of the printed names, that do not even have a note of exclamation after them, suggest the thrill that some of the pictures give us? For instance, a smiling portrait of a young man, with patches of light and shade on his face that might have been applied with a palette-knife, gave us quite a pleasurable shock; it was so daring and ultra modern, and yet the catalog told us, in its colorless way, that it was Bertram Park's "The Rt. Hon. the Earl of Latham," one of the least conspicuous-looking people we saw at Davos this summer. Then we get a shudder and think that we are looking at the face of a corpse, only to be reassured by the catalog's brief explanation of "Mask". And then we come to quite a new departure in child-studies, something individual and original, with an old master's look about it and without the usual hall-mark of the modern studio. A new exhibitor, we think, probably bursting with new ideas. But the catalog puts us right with the information that it is "Pamela Smith, daughter of Lord Birkenhead," by Marcus Adams, certainly not a new name.

(Continued on Page 318)



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the law-offices of Norman T. Whitaker of Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The patents mentioned below were those issued during the month of October from the United States Patent Office, the last issues of which have been disclosed to the public.

Patent, number 1,427,456, a Method of Producing Pictures with Exaggerated Perspective, has been issued to Burr E. Giffen of New York, assigned.

William A. Peters of Chicago, Ill., has received patent, number 1,427,546, on a Camera.

A Photographic Developing and Fixing Apparatus patent, number 1,427,741, has been issued to Frank E. Jones and Charles A. Schwab of Mission Hills, Kan., and Ferguson, Mo., respectively.

Patent, number 1,427,824, has been issued to Edwin F. Kingsbury of Rutherford, N.J., on a Focal-Plane-Shutter-Curtain-Depressing-Mechanism.

Joseph M. Crowe of Brooklyn, N.Y., has received patent, number 1,428,009, on a Method of Preparing a Rotary Gravure Tone and Line Positive.

Patent, number 1,428,352, a Film-Numbering Machine, has been received by Joseph Altschuler of Los Angeles, Calif., assigned.

Photographic-Film Carrier patent, number 1,429,370, has been issued to Anthony A. Barber of Arlington, N.J., assigned.

Edwin W. Clark of Chicago, Ill., has received his patent on Photographic, patent, number 1,429,715.

Patent, number 1,429,723, has been issued to Henry R. Eason of London, England, on a Photographic-Printing Apparatus.

A Developing Basket patent, number 1,429,889, has been granted to George B. Lambert, of Huntingdon, Tenn.

Patent, number 1,430,059, has been received by Hiram C. J. Deeks, assigned, of Sea Cliff, N.Y., on Color Photography.

Another on Color Photography, patent, number 1,430,060, has been issued to Hiram C. J. Deeks, of Sea Cliff, N.Y., assigned.

A third patent on Color Photography has been issued to Hiram C. J. Deeks of Sea Cliff, N.Y. It is also assigned. Patent, number 1,430,061.

Eugen Albert of Munich, Germany, has invented a Process of Producing Printing Plates, patent, number 1,430,347.

Photographic Camera patent, number 1,430,478, has been issued to Thomas Wallace of New York.

Vest-Pocket Film-Camera patent has been issued to Reinhart W. Pitman of New York City. Patent, number 1,430,582.

Henry Baumgartel of Chicago, Ill., has received patent, number 1,430,615, on an Adjustable Photographic Mask.

A Focusing-Finder for Cameras patent, number 1,430,684, has been issued to William H. Sack of Madison, Wis.

Patent, number 1,431,432, on a Photographic-Print-

ing Device has been issued jointly to Herbert F. Scobie and Milo Ladd, both of Sleepy Eye, Minn.

Focusing-Attachment for Roll-Film Cameras patent has been issued to Alfred Hilder, Pittsburg, Kansas. Patent, number 1,431,637.

Henrietta Hudson of New York City has received patent, number 1,431,663. The device which she has patented pertains to Color-Photography.

Patent, number 1,431,664, issued to William C. Heubner, has been assigned to the Huebner-Bleistein Patents Company of Buffalo, N.Y. The patent is on a photographic-printing apparatus.

An Attachment for Film-Cameras patent has been issued to Julius B. Torgeson of Minneapolis, Minn. Patent, number 1,431,851.

John G. Jones of Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., has received patent, number 1,431,893, on a Film-Feeding Apparatus.

Another photographic patent has been assigned to the Eastman Kodak Company, by Alonso S. McDaniel of New York City, on an Antistatic Photographic Film. Patent, number 1,431,894.

William F. Folmer of Rochester, N.Y., has also assigned his patent, number 1,431,908, to the Eastman Company. His device is a Cut-Film Magazine.

A Plate-Pack Adapter patent, number 1,431,445, was issued to Sherman M. Fairchild of Oneonta, N.Y.

Patent, number 1,432,269, has been issued to Albert R. Turner of Brighton, England, on a Photographic Film-Developing Apparatus.

1,432,366 is the patent number of an Antistatic Photographic Film. The patentee has assigned the patent to the Eastman Kodak Company. The inventor is Albert F. Sulzer of Rochester, N.Y.

He has also assigned patent, number 1,432,367, to Eastman on an Antistatic Photographic Film.

He also has a third patent issued, number 1,432,368, on a Photographic Film. This is also assigned to the Eastman Kodak Company.



London Letter

(Continued from preceding page)

The show is strong in landscapes; in fact, it is somewhat of a landscape-year. Bertram Cox has six, printed in much the same way as his exhibits at the "Royal"; but to our mind, none of them was quite equal to the picture of his at the "Royal", described earlier in these notes. It was cheering to see an example—only one—of the refined portraiture for which Reginald Craigie, for a long time the popular secretary of the old Salon, used to be famous.

There are two screens, one at each end of the gallery, on which prints are hung. As we traveled around to the last section of wall-space, which, from long experience we know receives all the photographs that are not of the best, we thought, if the selection had been a little stricter, the screens could well have been dispensed with, and the show thereby strengthened.



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You can do things with a filter or portrait attachment on your camera that would be otherwise impossible. A color filter gives proper tonal qualities and helps in securing beautiful cloud effects. The portrait attachment permits you to secure large head or bust pictures.

We know Wollensak filters and portrait attachments are right because we make them. The price is right, too. Filters, \$1.00 for $3\frac{1}{4} \times 5\frac{1}{2}$; 75c for smaller sizes; larger sizes proportionate. P. A.'s, 60c, sizes up to $3\frac{1}{4} \times 5\frac{1}{2}$.

Know the joy of
making pictures with a lens
you know is right.

Summer-time, picture-taking time, is here. And the beauties of nature and all outdoors are a constant lure to the man with the camera.

But picture-taking with an inefficient lens equipment is oftentimes a disappointment. On some pictures, the crisp-cutting qualities and speed of the Wollensak Velostigmats are desirable. Again, particularly in pictorial work, the beautiful atmospheric softness of the Verito enhances the beauty of the picture.

Whatever the nature of your work, whether you own a hand-camera or Graflex, commercial or studio outfit, we have the lens that will help you secure the negative quality you desire. Tell us your requirements and let us send our attractive new catalog.



—and here is the Verito Diffused Focus f4—unique in construction, versatility, and the beauty of the pictures it produces.

Why the Betax is inexpensive

Price is not always a criterion of merit.

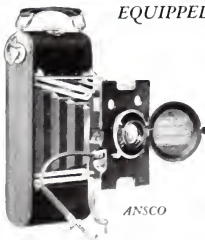
The Betax shutter, like the Gammox and Deltax, is comparatively inexpensive. Yet its reliability and absolute accuracy of exposure, is truly exceptional. Its moderate price is made possible by its simple construction. And simplicity not only minimizes expensive assembling costs, but also insures sturdiness and reliability.

We can fit a Betax to your lens, or supply our own lenses so equipped.

THESE ARE SOME OF THE CAMERAS

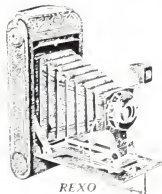


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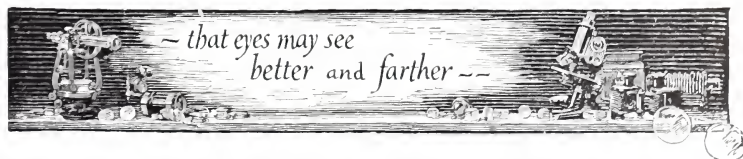
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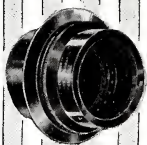
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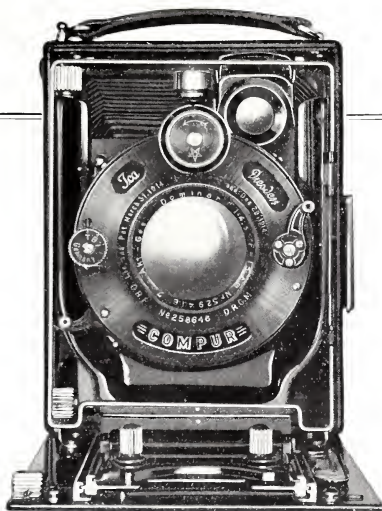


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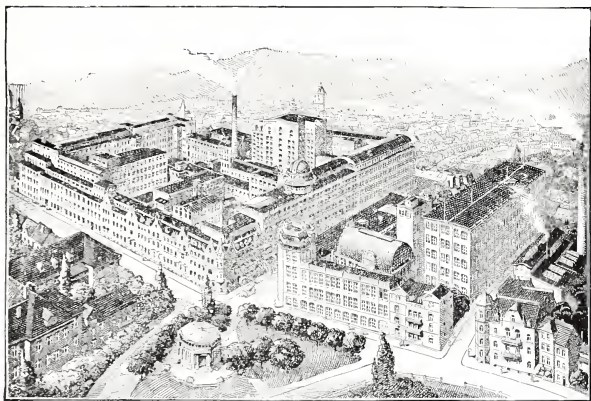
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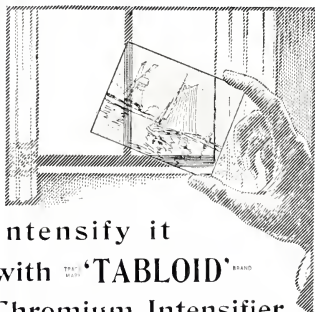
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Airplane-Photography	Herbert E. Ives	\$4.00	Dec. 1921
American Annual of Photography 1922 (cloth)	Percy Y. Howe	2.50	Jan. 1922
Behind the Motion-Picture Screen	Austin Lescarbourea	3.50	June 1920
Condensed Course in Motion-Picture Photography	N.Y. Institute of Photography	6.00	Aug. 1920
Everyman's Chemistry	Elwood Hendrick	2.00	Dec. 1917
Handbook of Photomicrography	H. Lloyd Hind & W. B. Randles	4.00	June 1914
How Motion-Pictures Are Made	Homer Croy	4.00	Jan. 1919
How to Make Good Pictures	Eastman Kodak Company	.40	
How to Use the Air-Brush	Samuel W. Frazer	1.50	
Kinema Handbook	Austin Lescarbourea	3.00	Dec. 1921
Light and Shade—And Their Applications	M. Luckiesh	3.50	
Modern Telephotography (paper edition, \$1.50)	Capt. Owen Wheeler	cloth, 1.75	Aug. 1910
Photo-Engraving Primer	Steven H. Horgan	1.50	Nov. 1920
Photograms of the Year 1921	F. J. Mortimer, F.R.P.S.	cloth, 3.50	Mar. 1922
Photographic Amusements	Walter E. Woodbury	1.50	Apr. 1922
Photography and Fine Art	Henry Turner Bailey	2.50	Apr. 1919
Photography and Its Applications	William Gamble, F.R.P.S.	1.00	Nov. 1920
Photography for Students of Physics and Chemistry	Louis Derr, A.M., S.B.	2.25	Dec. 1913
Photography in Colors	George Lindsay Johnson	3.00	Sept. 1914
Photography—Its Principles and Applications	Alfred Watkins, F.R.P.S.	English Edition 4.00	Apr. 1920
Photography of To-Day	H. Chapman Jones, F.R.P.S.	2.50	Dec. 1912
Pictorial Composition in Photography	Arthur Hammond	3.50	Aug. 1920
Pictorial Landscape Photography	Photo-Pictorialists of Buffalo	3.50	Jan. 1922
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Practical Kinematography and Its Application	Frederick A. Talbot	1.50	
Practical Photo-Micrography	J. E. Barnard	5.00	
Saturday with My Camera	S. C. Johnson	2.00	Nov. 1914
Systematic Development of X-ray Plates and Films	Lehman Wendell, B.S., D.D.S.	2.00	Feb. 1920
The Air-Brush in Photography	George F. Stine	3.50	Nov. 1920
The Commercial Photographer	L. G. Rose	4.00	Oct. 1920
The Dictionary of Photography	E. J. Wall, F.R.P.S.	5.00	July 1917
The Fine Art of Photography	Paul Lewis Anderson	3.00	Nov. 1919
The Fundamentals of Photography	C. E. K. Mees, D.Sc.	1.00	Oct. 1920
The Optical Projection	Russell S. Wright	1.60	Nov. 1920
Wonderland of the East	William Copeman Kitchin, Ph.D.	6.00	Apr. 1921

ART-BOOKS

A Treatise on Art. In Three Parts	John Burnet, F.R.S.	\$2.00	Dec. 1913
Art-Treasures of Washington	Helen W. Henderson	3.00	Feb. 1912
Boston Museum of Fine Arts	Julia De Wolf Addison	3.00	Aug. 1910
Composition in Monochrome and Color	Arthur W. Dow	5.00	Apr. 1913
How to Study Pictures	Charles H. Caffin	4.00	
Picture-Dictionary	J. Sawtelle Ford	1.00	Oct. 1917
Twelve Great Paintings	Henry Turner Bailey	3.00	Dec. 1921
The Art of the Wallace Collection	Henry C. Shelley	2.50	July 1913
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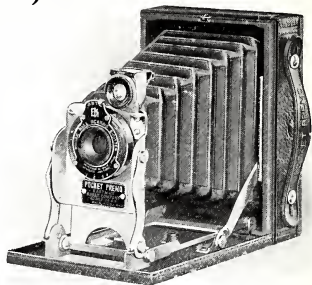
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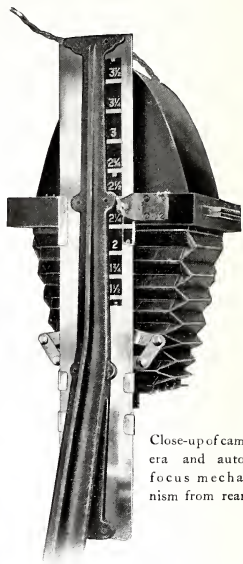
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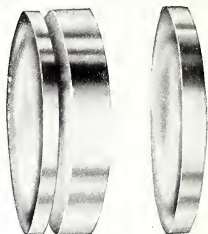
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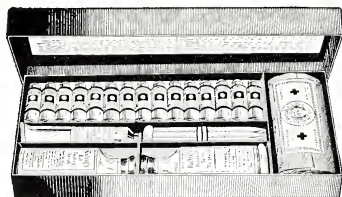
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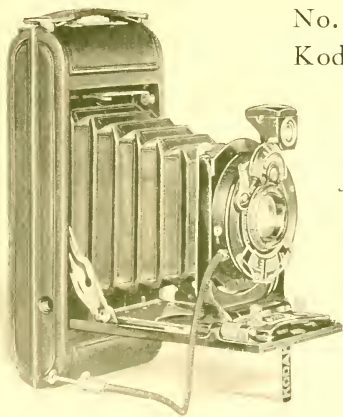
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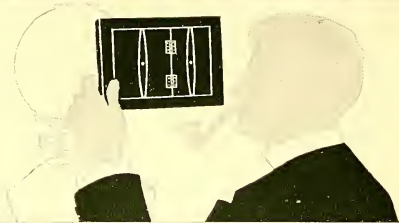
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